

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

ALAN AMRON Pro se

CASE NO.:

Plaintiff,

vs

**COMPLAINT
DEMAND FOR TRIAL BY JURY**

**3M MINNESOTA MINING & MANUFACTURING
COMPANY AND ARTHUR FRY**

Defendants.

_____ /

**COMPLAINT FOR BREACH OF CONTRACT, DEFAMATION,
FRAUD AND CONCEALMENT AND DECLARATORY JUDGMENT**

Plaintiff Alan Amron ("Plaintiff" "Amron"), Complaint states as follows:

1. This is an action brought for the purpose of determining an actual controversy of breach of contract, defamation, fraud and concealment and declaratory judgment. This case is not the patent infringement subject matter of the 1997 or 2016 actions.

JURISDICTION AND VENUE

2. This Court has jurisdiction over this matter based upon diversity of citizenship under 28 USC § 1332(a) because the amount in controversy exceeds \$75,000.

3. Venue is proper in this Court because the Plaintiff resides in the district in which this Court sits. Venue in this district is proper under 28 U.S.C. Section 1391 and 1400 (b).

INTRODUCTION

4. This is an action for breach of contract, fraud and concealment and defamation arising

from the defendants' failure to perform their obligations under a valid contract with the plaintiff, their publication of false and harmful statements about the plaintiff, their fraudulent patent and trademark filings with the USPTO and their denial of the plaintiff's rights under the contract.

Plaintiff is alleging the following legal theories:

- a. **Breach of contract:** The defendants breached the settlement agreement by making disparaging remarks about the plaintiff and refusing to abide by the agreement.
- b. **Defamation:** The defendants' statements were defamatory because they were false, misleading and made with malice.
- c. **Fraudulent misrepresentation or concealment:** The defendants fraudulently misrepresented in their filings for the Post-it trademark and sticky notes patents.
- d. **Declaratory Judgment:** A declaratory judgment that U.S. Patent No. 5,194,299 is invalid and unenforceable; A declaratory judgment that the Post-it trademark is invalid and unenforceable; An injunction prohibiting 3M and Fry from further defaming plaintiff; An order requiring 3M and Fry to deliver up for destruction or impoundment all infringing products, materials, and documents in their possession, custody, or control; An order requiring 3M and Fry to account for and disgorge all profits and damages derived from their 46 years of wrongful conduct; Compensatory, consequential, exemplary, and punitive damages; Consulting Attorneys' fees and costs; and Any other relief that the Court deems just and proper.

THE PARTIES

5. Plaintiff Alan Amron ("Plaintiff" or "Amron") is a 75-year-old retired citizen of Quogue, State of New York.

6. Plaintiff "Amron" is a professional inventor making his living all of his life as a known

American inventor, with 40 United States Patents awarded and issued to him in several different product industries. His name and reputation as an American inventor has been severely damaged directly due to the Defendants' actions.

7. Upon information and belief, Defendant 3M Minnesota Mining and Manufacturing Company ("Defendant" or "3M") is a company formed and existing under the laws of the State of Minnesota.

8. Upon information and belief, Defendant Arthur Fry ("Defendant" or "Fry") is or was an employee of Defendant "3M", a Consumer products maker and distributor.

9. Upon information and belief, Defendants are citizens of states other than New York since, upon information and belief, none of its partners is a citizen of the State of New York.

10. Upon information and belief, Defendants are subject to personal jurisdiction in this district because they have committed tortious acts within this district, have transacted business within this district, and have caused injury to persons or property within this district.

11. Upon information and belief, Defendants have sufficient minimum contacts with this district and/or otherwise intentionally avail themselves of the markets within this district through the promotion, sale, and marketing of their products and services, to render the exercise of jurisdiction by this Court permissible under traditional notions of fair play and substantial justice.

STATEMENT OF KNOWN MATERIAL FACTS

12. Upon information and belief, at all relevant times, the Defendants were a maker/seller of Press n' peel sticky bookmark and Post-it sticky Notes.

13. Based upon such marketing, the Defendants expressly represented to consumers, including Plaintiff, that Post-it sticky Notes is an invention by 3M and Arthur Fry in 1974. (The basis for the Plaintiff's information is from company websites, news articles and Wikipedia

pages posted on the internet)

14. In reliance upon Defendant's representations regarding the claims of inventorship of Press n' peel and Post-it Notes the sticky repositionable reusable paper notes pads product, Plaintiff "Amrons' reputation as an American inventor of the first such sticky notes repositionable reusable memo sticky notes paper combination product in 1973 has caused him irreparable emotional and financial damage.

15. In reliance upon Defendant's representations and claims regarding the inventorship dates of the Post-it Note product, the answer to not using pins and or scotch tape to post a memo or a note on to a surface without damaging the surface, and being able to reposition it over and over again, Plaintiff Alan Amron's reputation has been irreparably damaged.

16. Upon information and belief the Post-it sticky Note that has become the most used iconic stationery invention combination product on the planet, Defendants' Art "Fry" and "3M" continue to claim inventorship when in fact they publicly claim to have invented it in 1974 when clearly Plaintiff "Amron" invented and put it into use in 1973, a year prior and at the same time right after Amron demonstrated his Press-on memo sticky notes to 3M marketing department in 1974. (see 3M marketing department employee testimony in Exhibit B attached)

17. Plaintiff "Amron" sustained extreme personal emotional and financial, including pain and suffering, as a direct result of Defendants' "3M" and Arthur "Fry's false and misleading inventorship claims.

18. Specifically, Plaintiff Alan "Amron" repeatedly and frequently suffered severe emotional (loss of creditability - defamation) and financial distress directly relating to the Defendants repeated false and misleading verbal and in print claims of first inventorship.

19. Upon information and belief, such severe emotional pain was/is caused by Defendants

false and misleading claims of first inventorship. The basis of such information and belief is that the frequency of the emotional and financial pain substantially diminished when Mr. Amron was credited with inventorship, substantially increased when Mr. Amron again began hearing and reading about Defendants claims of inventorship.

20. In addition, upon information and belief, the damage done to Plaintiff “Amron” by the Defendants “3M” and “Fry” false and misleading claims of first inventorship is permanent. The basis of such information and belief is that “Amron” continues to suffer occasional but severe emotional pain and financial hardships the likes of which he never suffered before he initially began hearing the Defendants “3M” and “Fry” false and misleading first inventorship claims.

21. Moreover, upon information and belief, government authorities have documented the fact that Post-it Notes produced by “3M” and Arthur “Fry” in 1977 was, based on company press and spokespersons inventorship releases that it was invented first by Arthur “Fry” in 1974 publicly concealed it until 1977. Plaintiff who actually invented it and put it into use in 1973 was in fact severely damaged by this.

BACKGROUND OF KNOWN MATERIAL FACTS

22. In 1997, plaintiff filed a lawsuit against 3M for infringing upon his trade secret rights, which disclosed his Press-on memo sticky notes invention to 3M in 1974. The case settled in 1998, with 3M financially compensating plaintiff and he agreeing not to sue again regarding this patent trade secret infringement subject matter. In 2016, he sued 3M and Fry again. However, the case was dismissed, with the judge ordering the upholding of the 1998 settlement agreement not to sue on the original subject matter. (U.S. Federal case CV-97-7281 AMRON vs 3M in the Eastern District of New York and U.S. Federal case CV-16-80125 Amron vs 3M, Art Fry and Spencer Silver in the Southern District of Florida).

23. Now in 2023, plaintiff filed this lawsuit against 3M and Fry for breaching the 1998 agreement, defamation, fraud and concealment and declaratory judgement. Despite the settlement agreement and court ruling, 3M has made public statements claiming that "Amron had nothing to do with our Post-it sticky notes invention." 3M is fully aware from the litigation in 1997 and that the settlement upheld in 2016. These public statements by 3M have damaged plaintiffs' reputation and hindered his earning potential.

24. However, proof is attached as Exhibit B here that plaintiff had, at the very least, a connection to the invention of Post-it sticky note. An eyewitness, Daniel Dassow, a former employee of 3M's marketing department, has come forward under oath, admitting that Press on memo sticky notes were indeed demonstrated to him and his colleagues in 1974. 3M's response was positive, recognizing it as a great product. Daniel Dassow was bewildered years later when 3M distanced itself from plaintiff, falsely claiming that he had nothing to do with the invention of Post-it sticky notes. The financial damage plaintiff suffered spans from 1977 when 3M introduced Press 'n peel, a failed sticky bookmark, followed by a change in marketing strategy in 1980, relabeling to Amrons' original intended use as Post-it sticky note.

25. In 1968, Spencer Silver, a 3M scientist, accidentally invented a tacky "glue", which initially had no mention in his patent 3,691,140 of a clear use or purpose. (see Exhibit F here)

26. In 1974, Plaintiff "Amron" disclosed his Press-on memo sticky notes invention, which consisted of a paper and pad combination with a repositionable, reusable, removable, and self-sticking low-tack adhesive, to 3M's marketing department, including Daniel Dassow, a former employee of 3M who has come forward under oath to confirm Plaintiff's disclosure. (See Exhibit B attached hereto.)

27. Upon information and belief, after the marketing department saw Plaintiff's Press-on

sticky notes invention, they realized the potential use for Silver's "glue" invention when Defendant "Fry" suggested applying the sticky glue to a bookmark for his church hymn book.

28. In 1977, 3M introduced the sticky bookmark as Press 'n peel, but it failed to gain popularity.

29. In 1980, 3M changed the name of the product to Post-it Note, and marketed it as a memo pad, which was Plaintiff's original intended use disclosed to 3M in 1974.

30. In 1997, Plaintiff filed a lawsuit against 3M for infringing upon his trade secret rights, which disclosed his Press-on memo sticky notes invention to them in 1974. The case was settled in 1998, with 3M financially compensating Plaintiff and Plaintiff agreeing not to sue again regarding this patent trade secret infringement subject matter. (see Exhibit A attached)

31. In 2016, Plaintiff sued 3M and Fry again. However, the case was dismissed, with the judge ordering the upholding of the 1998 settlement agreement not to sue on the original subject matter.

32. Despite the settlement agreement and court ruling, 3M has made public statements claiming that "Amron had nothing to do with our Post-it sticky notes invention." They are fully aware that Plaintiff sued them for this in 1997 and that the settlement was upheld in 2016. These continued and persistent false and misleading public statements by 3M have damaged Plaintiff's reputation and hindered his earning potential.

33. For example, on the 3M official website, it states: "In 1968, Dr. Spencer Silver, a 3M scientist, developed a unique, low-tack adhesive that would stick to things but also could be repositioned multiple times. He was trying to invent a super-strong adhesive, but he came up with a super-weak one instead. For five years, he promoted his "solution without a problem" within 3M, both informally and through seminars, but without much success. One day, another

3M scientist, Art Fry, who had attended one of Silver's seminars, remembered the light adhesive when he was daydreaming about a bookmark that would stay put in his church hymnal. The rest is history".

34. Furthermore, a 3M spokeswoman said that "3M developed Post-it Notes without any input or inspiration from Mr. Amron and it is false and misleading for him to state or suggest that he created, invented, or had any role in the product's development,"² and that "There was nothing in the settlement agreement that limited what 3M could say."

35. These statements by 3M are false, misleading, and defamatory, as they contradict the facts and evidence of Plaintiff's involvement in the invention of Post-it sticky notes, as well as the terms and spirit of the settlement agreement.

36. Defendant's actions were intentional, malicious, and outrageous, and caused Plaintiff physical injury, emotional distress, and property damage.

37. 3M and Arthur Fry's Fraudulent acquisition of illicit proceeds for an unfair advantage in the marketplace: Patent Number 5,194,299 and fraudulent acquisition of advantages for Post-it Trademark have been enforced multiple times over the years, as evidenced by the following examples.

a. In 1992, Fry received several final office actions from the USPTO for non-compliance with their rules and regulations.

b. On December 18, 1992, the patent examiner issued a final office action to Fry. The action upheld the rejection of the patent application's claims as being anticipated or obvious in view of the prior art references. Additionally, the final office action maintained the objection to the drawings and specification of the patent application for non-compliance with the rules and regulations. Fry argued that there was no prior art comparable to his sticky note, even though he

was aware or it was presumed that he should have been aware of Amron's Press-on Memo, which was disclosed to 3M in 1974 and subsequently published and sold in interstate commerce, thereby making it public in 1974. This knowledge was present when Fry responded to the office actions.

c. In 1989, 3M filed a patent infringement lawsuit against Johnson & Johnson concerning their Magic Notes, which bore similarities to Post-it Notes but utilized a different adhesive formula. The case was settled out of court in 1990, with Johnson & Johnson agreeing to cease selling Magic Notes and pay an undisclosed settlement amount to 3M.

d. In 1997 (the same year Amron filed a lawsuit against 3M regarding the 1974 disclosure of his Press-on Memo sticky notes to them), 3M sued Avery Dennison Corporation (the same Ohio company 3M refused to allow, as required by paragraph 6 of Amron's 1998 settlement agreement, to produce my Press-on Memo sticky notes for me) for trademark infringement due to their Sticky Notes, which also shared similarities with Post-it Notes but had a different shape and color (similar to Amron's Press-on Memo in terms of shape and white memo paper color). 3M secured a jury verdict of \$44 million. Considering interest, the repayment amount owed by 3M to Dennison would be \$111,408,629 in 2023 (see the attached Exhibit G for the bank interest chart).

e. In 2017, 3M filed a patent infringement lawsuit against a Chinese company called Guangzhou Horizon for allegedly infringing on the patent in China. The case was settled out of court in 2018.

f. The validity of the patent and trademark for Post-it notes should be nullified, and the millions of dollars that they have received from enforcing them must be returned with interest and penalties. Additionally, appropriate legal measures should be taken to punish 3M and Fry for their 46 years of fraudulent conduct.

38. Although plaintiff is barred from suing over the agreed patent trade secret violations subject matter, it should be noted that these fraudulent illicit actions on the part of defendants 3M and Arthur Fry are such that should null and void the agreement and allow plaintiff to re visit his original patent trade secret subject matter.

STATEMENT OF CLAIMS

FIRST CLAIM FOR RELIEF - CAUSE OF ACTION - BREACH OF CONTRACT

39. Plaintiff repeats and realleges the allegations set forth in Paragraphs 1 through 38 above, with the same force and effect as if set forth in full herein.

40. Plaintiff and 3M entered into a valid and enforceable settlement agreement both verbally and in writing in 1998, which resolved Plaintiff's trade secret patent infringement claim against 3M. Under which Plaintiff agreed to release his patent and trade secret claims against Defendant, and dismiss his litigation for his invention, the Press-on memo sticky notes, that he disclosed to 3M in 1974.

41. The settlement agreement was a valid and enforceable contract between Plaintiff and Defendant 3M, and was supported by adequate consideration.

42. Plaintiff performed all of his obligations under the settlement agreement, or was excused from performance by Defendants' breach or repudiation of the agreement.

43. Defendant 3M breached the settlement agreement by failing to comply with amongst other things, paragraph 6 of the agreement, which required 3M to allow "Amron" or a company such as Avery Dennison Corporation, an Ohio company, to produce Plaintiff's Press-on memo sticky notes for him.

44. Defendants 3M's breach of the settlement agreement was material and not cured within a reasonable time after notice of the breach.

45. Paragraph 6 of the settlement agreement explicitly states that 3M shall not prevent Amron from selling his Press-on memo pads. Despite this provision, over the years, when Amron attempted to license or sell his invention, the looming threat of 3M suing them hindered the fulfillment of paragraph 6. When approached to get assurances from 3M as was called for in the agreement, they refused to allow the manufacturer **Avery Dennison Corporation** of Ohio (a major competitor of 3M) to make Amron's Press-on memo sticky notes. Additionally, paragraph six clearly acknowledges that 3M recognized Amron's 1974 invention disclosure, but continued to defame Amron in public statements. Paragraph 6 states:

"3M acknowledges that it has no right to prevent AMRON from manufacturing and selling AMRON's Press-on memo pads, as Originally Conceived, Introduced, and Put into Public Use in 1974. However, 3M reserves the right to request, and AMRON agrees to provide proof by clear and convincing evidence, that memo pads **manufactured by or for AMRON** after the dismissal of the Action are the same as the Press-on memo pads, as Originally Conceived, Introduced, and Put into Public Use in 1974 if any questions arise in the future."

46. Both parties, Amron and 3M, orally agreed not to make any claims of inventing sticky notes. To support 3M's argument, they referred to a patent from years ago that mentioned glued pads. However, upon investigation years later, it was discovered that the patent described percent-glued pages, not reusable or repositionable sticky notes like Amron's Press-on memo sticky notes. This was their way of persuading Amron to accept the written agreement. It's worth noting that the patent in question did not describe the invention of sticky notes.

47. The settlement agreement contained a confidentiality clause, which stated that "the parties agree not to disclose the terms of this Agreement to any person or entity, except as required by law or as necessary to effectuate this Agreement." (See Exhibit A attached hereto.)

48. The settlement agreement also contained a release clause, which stated that "Plaintiff hereby releases and forever discharges 3M...from any and all claims...arising out of or relating to the subject matter of the Action." (See Exhibit A attached hereto.)

49. Plaintiff performed his obligations under the settlement agreement by dismissing his

lawsuit against 3M and refraining from suing 3M again on the same subject matter.

50. 3M breached the settlement agreement by making public statements that contradicted the facts and evidence of Plaintiff's involvement in the invention of Post-it sticky Notes, and implied that Plaintiff's claim against 3M was "baseless and fraudulent".

51. 3M's breach of the settlement agreement violated the confidentiality clause, as it disclosed the terms of the agreement to the public and undermined the purpose of the agreement.

52. 3M's breach of the settlement agreement also violated the release clause, as it revived and aggravated the claim that Plaintiff had released and discharged.

53. As a direct and proximate result of Defendants' breach of the settlement agreement, Plaintiff has suffered and continues to suffer irreparable harm and damages, including but not limited to loss of potential profits and market business opportunities, as well as unfair competition from Defendants 3M and Fry, who continued for 46 years to infringe and enforce their ill-gotten patent and trademark rights over the self-adhesive paper product market.

54. Plaintiff is entitled to recover damages from 3M for its breach of the settlement agreement, as well as specific performance of the agreement, injunctive relief, and attorneys' fees and costs.

SECOND CLAIM FOR RELIEF - CAUSE OF ACTION - DEFAMATION

55. Plaintiff repeats and realleges the allegations contained in paragraphs 1 through 54 as if fully set forth herein.

56. 3M published false and defamatory statements about Plaintiff.

57. The example damaging quotes from the 3M official website, which has been repeated in every major news story worldwide, but not limited to these are:

"In 1968, Dr. Spencer Silver, a 3M scientist, developed a unique, low-tack adhesive that would stick to things but also could be repositioned multiple times. He was trying to invent a super-strong adhesive, but he came up with a super-weak one instead. For five years, he promoted his "solution without a problem"

within 3M, both informally and through seminars, but without much success. One day, another 3M scientist, Art Fry, who had attended one of Silver's seminars, remembered the light adhesive when he was daydreaming about a bookmark that would stay put in his church hymnal. The rest is history."

The company spokesperson says it's confident it has accurately credited its own employees with inventorship. "3M developed Post-it Notes without any input or inspiration from Mr. Amron and it is false and misleading for him to state or suggest that he created, invented, or had any role in the product's development," the company said in a statement.

"3M developed Post-it Notes without any input or inspiration from Mr. Amron and it is false and misleading for him to state or suggest that he created, invented, or had any role in the product's development," said company spokeswoman Donna L. Fleming Runyon in an email.

On Friday, Runyon added that "3M was within its rights under the previous settlement to claim credit for creating the Post-it Note. There was nothing in the settlement agreement that limited what 3M could say," she said.

Source example of these false damaging and misleading 3M perpetuated statements:

History of Post-it® Notes | Post-it® Brand Retrieved on: 11/13/2023

Wall Street Journal story quotes: <https://www.wsj.com/articles/BL-LB-53337> Retrieved on: 11/13/2023

Pioneer Press story quotes: <https://www.twincities.com/2016/03/11/who-invented-the-post-it-note-400-million-dispute-lingers/> Retrieved on 11/13/2023

58. As a result of the foregoing acts and omissions, plaintiff "Amron" was and is still caused to suffer extreme emotional and financial damages and embarrassment from the false and misleading first inventorship claims of the Press n' peel and then Post-it notes combination product by the defendants "3M" and "Fry," as described above.

59. Defendant's "3M" and "Fry" actions were willful, wanton, and/or reckless.

Defendants "3M" and "Fry" had a duty to exercise reasonable care and diligence in the designing, researching, manufacturing, marketing, supplying, promoting, packaging, sale, and/or distribution of Post-it notes into the stream of commerce. This includes a duty to assure that the inventorship of the product would not cause others to suffer unreasonable damages.

60. Defendants failed to exercise ordinary care in the designing, researching, manufacturing, marketing, supplying, promoting, packaging, sale, testing, quality assurance, quality control, and/or distribution of Post-it notes into interstate commerce. They knew or should have known that the Post-it notes product, which includes sticky notes, repositionable reusable paper memo

notes, and combination pads, was created and invented by the plaintiff in 1973. This is supported by the attached **Exhibit C** and the following cases: U.S. Federal Case CV-97-7281 Amron vs 3M in the Eastern District of New York, and U.S. Federal Case CV-16-80125 Amron vs 3M, Art Fry, and Spencer Silver in the Southern District of Florida. Defendants' negligence caused severe emotional pain and dire financial effects, which injuries are permanent and lasting in nature, and mental anguish, including diminished enjoyment of life.

61. The negligence of defendants, its agents, servants, and/or employees, included but was not limited to manufacturing and producing Post-it notes in such a manner as to permit the inventorship of the product to become an issue of contention to plaintiff and others worldwide.

62. Despite the fact that defendants knew or should have known that the Post-it notes product combination had been invented by plaintiff "Amron" in 1973, they continued to market, manufacture, distribute, and/or sell Press n' peel and Post-it notes to consumers. They stated they invented it first by mistake in 1974 in church, causing fraud allegations on the part of the defendants in not reporting this Amron prior art to the United States Patent Office. This damaged the plaintiff's good name and reputation, who clearly invented it and put it into practice and use in 1973. Defendants "3M" and "Fry" knew or should have known that plaintiff "Amron" would foreseeably suffer injury as a result of defendant's failure to exercise ordinary care and diligence, as set forth above.

63. Defendant's negligence was the sole proximate cause of plaintiff's injuries, which he has suffered and will continue to suffer unless inventorship is corrected in the world's view.

64. As a result of the foregoing acts and omissions, plaintiff "Amron" was and is still caused

to suffer extreme emotional and financial damages and embarrassment from the false and misleading first inventorship claims of the Press n' peel and then Post-it notes combination product by the defendants "3M" and "Fry," as described above.

65. Defendants expressly warranted that Press n' peel in 1977 and then Post-it Notes in 1980 utility product was invented by "3M" and Arthur "Fry," as described above. Defendants breached its express warranty.

66. Defendants impliedly warranted that Press n' peel and then Post-it notes were invented by "3M" and Arthur "Fry," as described above. Defendants breached its impliedly warranty.

67. Defendants 3M and Fry intentionally and willfully, to gain an unfair advantage in the market place, lied to the USPTO when filing for the Post-it trademark, by using an earlier Post-it in use date on a product different from the sticky notes, and when filing for their sticky notes patent the defendants failed to disclose Amron as prior art in their filings. Under the patent rules and regulations "all prior art must be disclosed upon filing". Both the Post-it trademark and the issued patents should be VOIDED and disciplinary action taken against the defendants for fraudulently acquiring the Post-it trademark and patent. (see Exhibits' D, E and E1 attached)

68. It is well-documented that the initial public use of the "Press n' peel" sticky bookmarks occurred in 1977 during a test market in four cities. Unfortunately, this product failed as a sticky bookmark.

69. Subsequently, 3M rebranded the sticky bookmark as "Post-it" and shifted its purpose to serve as a "Note." In 1980, they reintroduced it successfully in a test market, leading to the national launch of "Post-it Notes."

70. On March 12, 1981, 3M filed a trademark application for the already publicly recognized "Post-it" for use as follows:

a. **“Stationery Notes containing adhesive on one side for attachment to surfaces.”**

However, this filing willfully and blatantly referred only to the first date of use in commerce from a previous application filed on September 25, 1974 (Serial #72,879).

b. **“Paper and Cardboard sheet material having adhesive coating on both sides thereof for attachment to walls or other vertical surfaces to hold displays or other messages in place.”** Notably, the original intended trademark use by 3M was for vertical surfaces, not merely “adhesive on one side” Notes. The product’s versatility extends to desks, tables, refrigerators, and other papers on both vertical and horizontal surfaces.

71. 3M’s deliberate and fraudulent claim of an earlier first use date was a strategic move to gain an unfair advantage over any competition. (see Exhibit D attached) Trademark for Post-it Note single sided Pads was filed fraudulently by 3M on March 12, 1981 Serial number 300,787 and Registration number 1,198,694 Registered June 22, 1982. Claimed date of first use of the Post-it mark on pads was September 25, 1974. Trademark for Post-it two-sided paper and cardboard product was filed by 3M on December 29, 1975 serial number 72,879 and Registration number 1,046,353 registered August 17, 1976 for the Post-it mark "having adhesive coating on both sides thereof..." on paper and cardboard products with the very same claimed fraudulently by 3M September 25, 1974 date of first use as in the six years later application for Post-it NOTES date of first use.

- a. **TRADEMARK Counsel Opinion:** “Based on my review of the TMEP (Trademark Manual for Examining Procedure), I conclude that 3M, as the applicant, may utilize the earliest date of ANY trademark use in the registration process. However, the date provided for first use must accurately correspond to the goods described in the application. In this case, the date 3M provided as the first use date was incorrect, considering the specific description of the goods. This discrepancy could invalidate the application. To address this, a cancellation proceeding could be initiated.”

72. Alan Amron, with documented proof of a postmarked conception date on November 14, 1973, and sales offerings put into public use by July 22, 1974, predated 3M in inventing sticky

notes by two years. While 3M introduced the product in initial tests in 1977 as a sticky bookmark, Alan Amron's evidence from "PUBLIC RECORDS AND PEOPLE INVOLVED" establishes an earlier timeline. (see attached Exhibit C)

- **Spencer Silver:** In 1989, he conceived of a sticky "**glue**" with no specific intended purpose or use. There is no mention or suggestion at all in the patent of a use or purpose. Certainly, there was no mention of sticky notes or memos. (see Exhibit F attached here)
- **Alan Amron:** In 1973 conceived of the Press-on memo sticky "Note" and disclosed it to 3M executives in 1974. Confirmed by **Daniel Dassow** a former 3M employee in 1974.
- **Art Fry:** In 1974 suspiciously conceived the sticky "Bookmarks" invention in church in 1974. Which was not successful when marketed as a sticky "bookmark" in 1977.
- **Robert Molenda:** He was corporate boss at 3M in 1977.
- **Geoff Nicholson:** Was technical director of Fry's division at 3M in 1977.

73. Defendants falsely and fraudulently represented to the public, including Plaintiff, and the United States Patent and Trademark office that Press n' peel in 1977 and then Post-it notes in 1980 utility sticky combination of repositionable reusable paper notes product was in fact invented by "3M" and Arthur "Fry" in 1974, when in fact they knew or should have known that Plaintiff "Amron" invented it and put it into use one year prior in 1973. This is supported by the attached **Exhibit C**.

74. The representations made by defendants "3M" and "Fry" were false, fraudulent and the defendants either knew those representations to be fraudulent and false, or made those representations with reckless disregard as to whether the representations were true or not for business and financial gain reasons and to gain an unfair advantage over their competition in the marketplace. United States Patent & Trademark Office rules requires inventors to disclose all

known and unknown prior art, under penalty of perjury, or lose of patent. 3M and Fry knew and didn't report knowing, to assure they would get an issued patent. (see Exhibits' E and E1).

75. In reliance upon said 1974 first inventorship representations by the defendants, plaintiff "Amron" has been severely damaged, thereby sustaining the severe injuries described above.

76. By reason of the foregoing, plaintiff "Amron", has been damaged and is entitled to recover as against defendants "3M" and "Fry" jointly and severally in an amount to be proven at trial, but not less than \$1.5 Billion dollars.

77. By reason of the foregoing, plaintiff "Amron" is also entitled to an award of punitive damages from the defendants in an amount to be determined at trial, but not less than \$200 million dollars.

**THIRD CLAIM FOR RELIEF – CAUSE OF ACTION - FRAUDULENT
MISREPRESENTATION OR CONCEALMENT**

78. Plaintiff repeats and realleges the allegations contained in paragraphs 1 through 77 as if fully set forth herein.

79. Defendants 3M and Fry made false and material representations or omissions to Plaintiff and the United States Patent and Trademark Office (USPTO) regarding the novelty and non-obviousness of their alleged invention, the Post-it Notes, and the patentability of their patent application, U.S. Patent No. 5,194,299.

80. Defendants 3M and Fry knew or should have known that their representations or omissions were false and material, as they were aware or should have been aware of Plaintiff's prior invention, the Press-on memo, which was disclosed to Defendant 3M in 1974 and subsequently published and sold in interstate commerce, thereby making it public in 1974.

81. Defendants 3M and Fry made their representations or omissions with the intent to

deceive and induce Plaintiff and the USPTO to rely on them, and to obtain an unfair advantage in the marketplace and a monopoly over the self-adhesive paper product market.

82. Plaintiff and the USPTO justifiably relied on Defendants' representations or omissions to their detriment. Plaintiff relied on Defendants' representations or omissions when he disclosed his invention to Defendant 3M in 1974 and expected to enter into a licensing agreement with Defendant 3M. The USPTO relied on Defendants' representations or omissions when it granted U.S. Patent No. 5,194,299 to Defendant Fry in 1993.

83. As a direct and proximate result of Defendants' fraudulent conduct, Plaintiff has suffered and continues to suffer irreparable harm and damages, including but not limited to loss of recognition, compensation, royalties, profits, and market opportunities, as well as emotional distress and reputational harm.

84. Defendants 3M and Fry's fraudulent conduct also induced Plaintiff to enter into a settlement agreement with them in 1998, under which Plaintiff agreed to release his claims against Defendants and to refrain from further subject matter litigation, for the Press-on memo sticky notes.

85. Plaintiff would not have entered into the settlement agreement with Defendants if he had known the truth about their fraudulent conduct and the invalidity and unenforceability of their patent and trademark filing rights.

86. The settlement agreement is therefore voidable and should be rescinded by the Court, as it was based on fraudulent misrepresentation or concealment of material facts by Defendants 3M and Fry.

**FOURTH CLAIM FOR RELIEF - CAUSE OF ACTION – DECLARATORY
JUDGMENT (28 U.S.C. § 2201)**

87. Plaintiff repeats and realleges the allegations contained in paragraphs 1 through 86 as if

fully set forth herein.

88. There presently exists between Amron and 3M an actual and justiciable controversy with respect to Amron's case here for breach of contract and defamation interests in the loss of his good name and invention of sticky notes. The amount that 3M will owe to Amron is based upon 46 plus years of Post-it sticky note sales worldwide, his financial losses including a fair royalty, plus interest on that amount.

89. Although Amron has demanded that 3M and Fry acknowledge their obligations to Amron, 3M and Fry have refused to do so.

90. Amron seeks a declaratory judgment under 28 U.S.C. § 2201.

91. Amron alleges that there exists an actual and justiciable controversy between him and 3M with respect to his case for breach of contract and defamation interests in the loss of his good name and invention of sticky notes.

92. Despite Amron's demands, 3M and Fry have refused to acknowledge their obligations.

93. Plaintiff seeks a declaratory judgment from this Court that:

- a. The settlement agreement is valid and enforceable;
- b. Defendants have breached the settlement agreement by making false and defamatory statements about Plaintiff and not living up to agreements made;
- c. Plaintiff is entitled to damages and injunctive relief for Defendants' breach of the settlement agreement;
- d. Plaintiff is the original inventor of the sticky notes product and has a legal interest in the product.

IN SUMMARY

94. The current case focuses on allegations of breach of contract, as well as defamation,

fraud and concealment and declaratory judgement. It does not pertain to the patent infringement subject matter of the Amron vs 3M 1997 action, which was upheld in Amron vs 3M Fry federal Court in 2016.

95. Exhibit B is a sworn and signed affidavit that confirms that **Daniel Dassow**, a former 3M employee in the marketing department in 1974, was a witness to Alan Amron's disclosure of his Press-on memo sticky note invention to 3M executives in 1974. Exhibit A is the 1998 Post-it sticky notes settlement agreement between 3M and Alan Amron, which shows that 3M provided financial compensation to Amron as part of that oral and written agreement. Confirming what Alan Amron claims of disclosing his invention to 3M executives in 1974, Daniel Dassow, a former 3M employee, has provided unequivocal confirmation of Alan Amron's disclosure of his Press-on memo sticky note invention to 3M executives in 1974.

- a. Alan Amron's claim of being the true inventor of the Post-it sticky notes is further supported by Daniel Dassow, a former 3M employee, who has unambiguously confirmed Amron's disclosure of his Press-on memo sticky note invention to 3M executives in 1974. (see Exhibit B attached here)
- b. The Post-it trademark Registration number 1,198,694 was fraudulently acquired by 3M as stated in paragraph 71 (a) above, specifically to gain an unfair advantage in the marketplace. (see Exhibit D attached)
- c. The Post-it sticky note 3M/Fry U.S. Patent number 5,194,299, application number 948,095 filed on 12/31/1986 was/is fraudulent, because 3M and Fry failed to disclose known or should have been known to them, plaintiff's prior art - Press-on memo sticky notes disclosed to 3M and their marketing department in 1974 (as is confirmed by former 3M employee attached here in Exhibit B). 3M/Fry specifically did this to gain an unfair

advantage in the marketplace. Plaintiffs prior art would have not allowed this patent to ever issue. If reported in an interference action, the patent would have been immediately null and voided. Prior art known, or it is presumed to be known are important rules at the United States Patent & Trademark Office. (see Exhibit E & E 1 attached)

PRAYER FOR RELIEF

WHEREBY, Alan Amron, the inventor of the Press-on Memo sticky note, a self-adhesive paper product that he disclosed to 3M Company in 1974, has filed this third legal complaint against 3M and its employee Arthur Fry for fraud and unfair competition.

This complaint alleges that 3M and Fry misappropriated Amron's invention and used it to develop and market their own product, the Post-it Notes, under the protection of a fraudulently obtained patent and trademark. This complaint also alleges that 3M and Fry have used their patent and trademark rights to exclude Amron and others from competing with them in the self-adhesive paper product market, and to obtain millions of dollars in profits and damages from other companies that have attempted to sell similar products.

According to this complaint, Amron conceived of the idea for the Press-on Memo sticky note in 1973 and reduced it to practice and put it into out-of-state commerce in 1974. He then disclosed his invention to 3M, a leading manufacturer of adhesive products, in the hope of entering into a licensing agreement. He provided 3M with actual samples of his Press-on Memo sticky notes, as well as drawings and specifications of his invention. He also explained the method of making and using his invention to 3M. This disclosure in 1974 by Amron is corroborated in this complaint by Daniel Dassow, a former 3M marketing department employee.

However, 3M never entered into a licensing agreement with Amron, nor did it

compensate him for his disclosure of his invention. Instead, 3M misappropriated Amron's invention and used it to develop, manufacture, and market its own self-adhesive paper product, which it called Post-it Notes.

Fry, an employee of 3M, was involved in the development of Post-it Notes. Fry claimed to have invented Post-it Notes in 1974, based on his idea of using 3M employee Spencer Silvers' weak-tack adhesive to create a bookmark that would not fall off his hymnal. Fry filed a patent application for his alleged invention in 1980, which was granted as U.S. Patent No. 5,194,299 in 1993.

However, defendant Fry's alleged invention was not novel or non-obvious, as it was anticipated and rendered obvious by plaintiff Amron's Press-on Memo sticky note, which was disclosed to 3M in 1974 and subsequently published and sold in interstate commerce, thereby making it public in 1974. Fry was aware or should have been aware of Amron's Press-on Memo, as he worked for 3M and had access to the samples and information that Amron provided to 3M. Fry intentionally misrepresented or concealed the existence of Amron's Press-on Memo in his patent application and during the prosecution of his patent.

Defendants' 3M and Fry have used their patent and trademark rights to enforce their monopoly over the self-adhesive paper product market and to exclude plaintiff Amron and others from competing with them. 3M and Fry have filed and settled several lawsuits against other companies that have attempted to sell similar products, such as Johnson & Johnson, Avery Dennison Corporation, and Guangzhou Horizon. 3M and Fry have obtained several millions of dollars in profits and damages from these lawsuits and settlements.

The validity of the patent and trademark for Post-it Notes should be invalidated, and the millions of dollars that they have received from enforcing them must be returned with interest

and penalties. Additionally, appropriate legal measures should be taken to punish 3M and Fry for their 46 years of fraudulent conduct.

3M and Fry have also misled and deceived the public and the consumers by representing that they are the original and sole inventors and owners of the Post-it Notes, and by concealing the existence and prior art status of Amron's Press-on Memo.

This complaint also alleges that 3M's deliberate and fraudulent claim of an earlier first use date on the Post-it trademark filings was a calculated maneuver to gain an unfair advantage over any competition.

WHEREAS, The Plaintiff, Alan Amron, claims to be the original creator and first inventor of the first sticky repositionable reusable memo/note paper and pad combination. The invention includes a repositionable low tacky tackless adhesive that is self-sticking, reusable, and removable. Plaintiff “Amron” has shown that his conception date was at least November 29, 1973, and that he put it into commerce and public use at least one year prior to the public admission in 1974 by Arthur Fry, a 3M employee. The Defendants’ concealed this information from the public. Plaintiff “Amron” officially put his invention into public use and commerce in 1974, which is at least three years prior to the Defendants’ public admission to putting Post-it notes named as Press n’ peel into commerce and use date of 1977. Then the Defendants renamed the very same combination product Post-It note in 1980.

WHEREFORE, Plaintiff “Amron” demands judgment against Defendants “3M” and “Fry” both jointly and severally on each of the above referenced claims and causes of action as follows:

1. An award of compensatory damages to Plaintiff “Amron” in an amount to

be determined at trial, but not less than \$1.5 Billion dollars, considering 3M's Post-it sticky notes Billions of dollars in sales over the last 46 years, plaintiffs' financial losses, lost business opportunities and including a fair royalty, plus interest;

2. An award of punitive damages to Plaintiff "Amron" in an amount to be determined at trial, but not less than \$200 million dollars;

3. A declaratory judgment by this Court that the settlement agreement is valid and enforceable, that Defendants' have breached the settlement agreement, that Plaintiff is entitled to damages and injunctive relief for Defendants' breach, and that Plaintiff is the original inventor of the first sticky note product;

4. A declaratory judgment that U.S. Patent No. 5,194,299 was and is invalid and unenforceable;

5. A declaratory judgment that the Post-it trademark is invalid and unenforceable;

6. An order requiring 3M and Fry to deliver up for destruction or impoundment all infringing products, materials, and documents in their possession, custody, or control;

7. An order requiring 3M and Fry to account for and disgorge all profits and damages derived from their wrongful conduct over the last 46 years of Post-it sticky notes sales;

8. Compensatory, consequential, exemplary, and punitive damages;

9. An injunction prohibiting Defendants from making any further false and defamatory statements about Plaintiff or his invention;

10. An award of consulting attorneys' fees and costs to Plaintiff;

11. Such other and further relief as the Court may deem just and proper.

Respectfully submitted,

DATED: This 20th day of November 2023

/Alan Amron/

Alan Amron, Pro se Plaintiff

103 Jessup Avenue Box 354
Quogue, New York 11959
(929) 250-3650
alanamron@yahoo.com

DEFENDANTS:

**3M Minnesota Mining & Manufacturing Company and
Arthur Fry;**

3M Company - Office of General Counsel

Asraf K. Bhugaloo, Senior Vice President and General Auditor
abhugaloo@mmm.com

Michael F. Roman, Chairman of the Board and Chief Executive
Officer mroman@mmm.com

Michael M. Dai, Secretary
mdai@mmm.com

Yen Florczak, Esq. Chief Intellectual Property Counsel
yflorczak@mmm.com

P.O. Box 33428
3M Center, Bldg. 220-11e-03
St. Paul, MN 55133
T: 888-364-3577
www.mmm.com
Email: investorrelations@3M.com

Arthur Lawrence Fry
Dob: 08/19/1931
2270 Valley View Avenue East,
St Paul, Minn., 55119,
Phone# 651-739-3421

CERTIFICATE OF SERVICE

I hereby certify that on this day November 20th, 2023, I served the attached documents to the Defendants. A True and Correct Copy of this “COMPLAINT” and “DEMAND FOR TRIAL BY JURY” was served upon Defendants by email and process service:

DATED: This 20th day of November 2023

/Alan Amron/

Alan Amron, Pro se Plaintiff
103 Jessup Avenue Box 354
Quogue, New York 11959
(929) 250-3650
alanamron@yahoo.com

DEFENDANTS:

**3M Minnesota Mining & Manufacturing Company and
Arthur Fry;**

3M Company - Office of General Counsel

Asraf K. Bhugaloo, Senior Vice President and General Auditor
abhugaloo@mmm.com

Michael F. Roman, Chairman of the Board and Chief Executive
Officer mroman@mmm.com

Michael M. Dai, Secretary
mdai@mmm.com

Yen Florczak, Esq. Chief Intellectual Property Counsel
yflorczak@mmm.com

P.O. Box 33428
3M Center, Bldg. 220-11e-03
St. Paul, MN 55133
T: 888-364-3577
www.mmm.com
Email: investorrelations@3M.com

PLAINTIFF “AMRON” EXHIBIT LIST

EXHIBIT A

True and correct copy of 1998 Amron vs 3M settlement agreement, 3M check and 3M letter.

EXHIBIT B

True and correct copy of Former 3M marketing department employee witnessed Amron Press-on memo sticky notes presentation in 1974 while working for 3M, affidavit notarized and signed.

EXHIBIT C

True and correct copy of Michael Solomon, Esq. attorney in 1974, affidavit notarized and signed.

EXHIBIT D

True and correct copy of Fraudulently filed Trademark Reg. No. 1,198,694 by 3M for Post-it.

EXHIBIT E

True and correct copy of Fraudulently filed US 5,194,299 Patent by 3M FRY for Post-it.

EXHIBIT E1

True and correct copy of USPTO Fraudulently filed US 5,194,299 Patent by 3M FRY for Post-it.

EXHIBIT F

True and correct copy of Spencer Silvers filed US 3,691,140 Patent for a tacky sticky “glue” with specifically no mention of any specific use or purpose. Especially no mention of a sticky note product.

EXHIBIT G

True and correct copy of a bank chart of interest on \$44 Million that 3M owes \$111 Million back to one of their victims of their fraud from 1997 - 2023.

EXHIBIT A

Settlement Agreement and Release

The parties to this Agreement are Minnesota Mining and Manufacturing Company, a Delaware corporation having its principal place of business in the State of Minnesota (hereinafter referred to as "3M") and Alan B. Amron (hereinafter referred to as "AMRON").

1. AMRON filed a complaint against 3M on December 10, 1997, in the United States District Court for the Eastern District of New York (Civil Action No. 97 7281) (hereinafter referred to as "the Action") alleging an actual controversy under the patent laws of the United States, Title 35 U.S.C. sections 34, 42 and 102 (a), (b) and (g) and for unfair competition arising under the Trademark Act of 1946, 15 U.S.C. section 1051 etc. as amended (hereinafter "Lanham Act") and the Sherman Antitrust Act 15 U.S.C. sections 1-7 and the Clayton Act 15 U.S.C. section 1121.

2. The parties now wish to resolve the aforementioned Action amicably and have agreed that AMRON shall file a Notice of Dismissal, dismissing the Action with prejudice, as soon as possible after the effective date of this Agreement and within ten (10) days after entry thereof, 3M shall pay to AMRON the sum of \$12,000 (Twelve Thousand Dollars) ("the Negotiated Sum").

3. Effective with the entry of the Notice of Dismissal and receipt by AMRON of the Negotiated Sum, AMRON shall and does hereby release and forever discharge 3M, its officers, agents, directors, owners, employees, successors, assigns, divisions and affiliated and subsidiary corporations and each of them from any and all claims, demands, obligations, debts, damages, agreements, promises, or causes of action of every nature, kind and description whatsoever, in law or in equity, whether known or unknown, and whether suspected or unsuspected that AMRON ever had, now has, or hereafter can, shall or may have against 3M arising out of, directly or indirectly, or related in any way to the subject matter of the Action.

4. It is understood and agreed that this is a compromise and settlement of disputed claims and that nothing contained herein shall be construed as an admission by 3M that the claims set forth in the Action by AMRON are true, correct, accurate, or actionable.

5. AMRON represents and warrants that, to the best of his knowledge, no other person or entity has or has had any interest in the all claims, demands, obligations, debts, damages, agreements, promises, or causes of action referred to in this Agreement, that he has the sole right and exclusive authority to execute this Agreement and has the exclusive authority to receive the consideration specified in this Agreement, and that he has not sold, assigned, transferred, acquired, conveyed or otherwise disposed of any of all claims, demands, obligations, debts, damages, agreements, promises, or causes of action referred to in this Agreement.

6. 3M acknowledges that it has no right to prevent AMRON from manufacturing and selling AMRON's Press-on memo pads, as Originally Conceived, Introduced and Put Into Public Use in 1974. However, 3M reserves the right to request, and AMRON agrees to provide proof by clear and convincing evidence that memo pads manufactured by or for AMRON after the dismissal of the Action are the same as the Press-on memo pads, as Originally Conceived, Introduced and Put Into Public Use in 1974, if any questions arise in the future.

7. All agreements, covenants, obligations, representations and warranties, express or implied, oral or written between 3M and AMRON concerning the subject matter hereof are contained herein. No other agreements, covenants, obligations, representations or warranties, express or implied, oral or written have been made by either party hereto to any other party concerning the subject matter contained in this Agreement and in the Action. All prior and contemporaneous conversations, negotiations, possible and alleged agreements, representations, covenants and warranties concerning the subject matter contained in this Agreement are merged herein. This is an integrated Agreement.

8. AMRON represents and states that in signing this Agreement he understands the terms of this Agreement, including without limitations, the nature, extent and duration of his rights and claims and that he has not been influenced to any extent whatsoever in entering into this Agreement by any representation or statements obligations, not expressly contained in this Agreement, and that he has relied on independently selected counsel.

9. AMRON represents and warrants that he has and shall continue to treat the terms of this Agreement as confidential and shall not disclose, either directly or indirectly, to third parties, make any public announcement with respect to this Agreement or any of the provisions hereof or the operations of the parties under them unless the written consent of 3M is first obtained for each such disclosure or announcement.

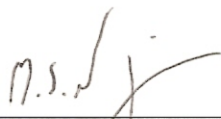
10. The Agreement shall be construed according to Minnesota law and shall be binding on the parties, their respective agents, representatives, successors, heirs and assigns.

11. The provisions of this Agreement shall be deemed separable. Therefore, if any part of this Agreement is rendered void, invalid or unenforceable, such rendering shall not affect the validity and enforceability of the remainder of this Agreement unless the part or parts that are void, invalid or unenforceable shall substantially impair the value of the Agreement to either party.

12. This Agreement shall become effective on the date that the last Party signs this Agreement. The Parties have signed the Agreement on the day and year written below.

MINNESOTA MINING AND
MANUFACTURING COMPANY

ALAN B. AMRON, Pro Se

By: 
M. S. Nozari

Date: January 21, 1998

By: 

Date: 1/22/98



February 3, 1998

Alan Amron
77 Horton Place
Syosset, New York 11791

Re: Alan B. Amron Pro Se vs. 3M
Case No.: CV 97-7281

Dear Mr. Amron:

Enclosed please find a check in the amount of \$12,000 per the Settlement Agreement signed January 22, 1998 by both parties.

Should you have questions or need additional information, please do not hesitate to contact me.

Sincerely,

Carolyn V. Peters
Carolyn V. Peters *cg*

CVP/cg
Enclosure

cc: L. Jacoby

Minnesota Mining and
Manufacturing Company

PO Box 33427
St. Paul, MN 55133-3427 USA
612 736 7929
612 736 3833 Facsimile
29 7023 Telex
PATENTS Cable



3M General Offices

3M Center Building 223-2S-07
St. Paul, Minnesota 55144-1000

75-46/919

717931

001738

Check
Date

02-02-98

Amt.

\$***12,000.00*

VOID AFTER 180 DAYS

Pay
To The
Order
Of

ALAN B. AMRON

Minnesota Mining and
Manufacturing Company



Authorized Signer

Payable Through Norwest Bank Red Wing, MN

⑈717931⑈ ⑆091900465⑆

27844⑈

262

Leonard C. Jacoby (LJ 6319)
KIRKLAND & ELLIS
Citicorp Center
153 East 53rd Street
New York, New York 10022
(212) 446-4800

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK**

ALAN B. AMRON.,

Pro Se Plaintiff

v.

3M (MINNESOTA, MINING
& MANUFACTURING)

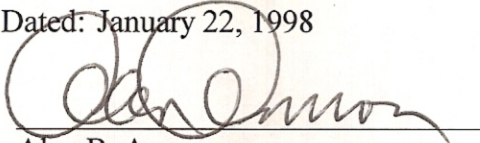
Defendant

97 Civ. 7281 (TCP)

**NOTICE OF DISMISSAL
WITH PREJUDICE**

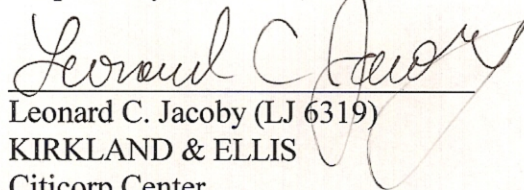
Notice is hereby given that the parties have stipulated and agreed that all of the claims brought by pro se Plaintiff Alan B. Amron against Defendant 3M may be and hereby are dismissed with prejudice pursuant to Fed. R. Civ. P. 41(a), with each party to bear its own costs.

Dated: January 22, 1998



Alan B. Amron
77 Horton Place
Syosset, New York 11791
(516) 692-2830
Pro Se Plaintiff

Respectfully submitted,



Leonard C. Jacoby (LJ 6319)
KIRKLAND & ELLIS
Citicorp Center
153 East 53rd Street
New York, New York 10022
(212) 446-4800
Attorneys for Defendant

Of Counsel:

William A. Streff, Jr.
KIRKLAND & ELLIS
200 East Randolph Drive
Chicago, Illinois 60601
(312) 861-2000

SO ORDERED: _____

U.S. District Judge

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA
PALM BEACH DIVISION**

CASE NO.: 16-80125-CV-Cohn/Seltzer

ALAN AMRON Pro se

Plaintiff,

**DANIEL DASSOW
AFFIDAVIT**

v.

**3M COMPANY AND ARTHUR FRY
AND SPENCER SILVER**

Defendants.

**DANIEL DASSOW
AFFIDAVIT**

Daniel Dassow, being duly sworn, deposes and states:

- 1- I am over the age of 18 and have knowledge of the facts stated in this affidavit.
- 2- I wrote the following unsolicited letter to Alan Amron via a LinkedIn connection on April 11, 2016.
- 3- "Alan, It's great to hear from you.

I worked at 3M in the mid-1970s as a computer consultant while getting my computer science degree at the University of Minnesota Institute of Technology.

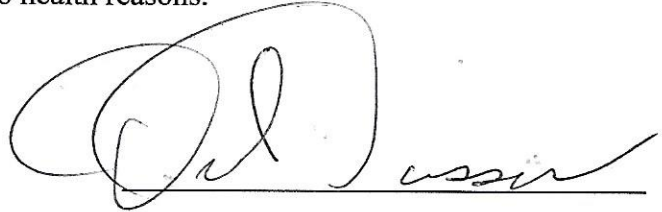
I worked at 3M's Corporate Marketing when you or one of your associates brought up a stack of paper held together by the adhesive you had developed. One of the office assistants, Joan George, distributed the Press-on memos to people around the area including the librarians Colleen Lang and Fran Upton, and Bill Gearhart one of the marketing analysts.

I believe we called the slips of paper sticky notes at the time. I remember that Joan recommended sizes for the memos, and enthusiastically promoted the little sticky notes.

I wish I had had the foresight to have kept one of the original sticky notes.

After working for 3M and graduating, I worked for McDonnell Douglas as an Operations Analyst. Among my many assignments, I worked on the staff of Boeing Chairman's Innovation Initiative (CII), which was an attempt to inspire entrepreneurship within Boeing.

I retired from Boeing in 2014 due to health reasons."



DANIEL DASSOW

STATE OF Missouri

COUNTY OF St. Charles

Sworn to or affirmed and signed before me on July 8th 2016 by DANIEL DASSOW.


NOTARY PUBLIC

ac ✓ Produced identification
MO DL #M148012014



AMBER N. CENTUNZI
My Commission Expires
December 4, 2017
St. Charles County
Commission #13554231

AFFIDAVIT

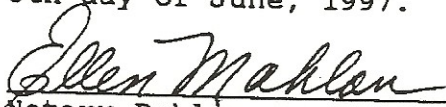
STATE OF NEW YORK)
) SS.:
 COUNTY OF NASSAU)

I, MICHAEL SOLOMON, ESQ., being duly sworn, deposes and says:

1. I am an attorney duly admitted to practice in the State of New York and was a partner in the firm of Fritz & Solomon in 1974 with offices located at 33 South Grove Street, Freeport, New York.
2. Alan Amron was a client of our office at that time.
3. Alan had retained our office to file for a New York Corporation called "Press On Memo Ltd". On or about July 24, 1974 we filed the Certificate of Incorporation with the Secretary of State through the office of Gerald Weinberg, Esq., 90 State Street, Albany, New York. A copy of the Certificate of Incorporation is annexed hereto.
4. Alan was a 100% shareholder of the corporation at the time of incorporation.
5. Alan had invented a memo pad with a strip of stickem glue on the back of each sheet of paper enabling one to post notes in and around the office or home without the use of pins or tape and without leaving a glue residue.
6. The purpose of the Corporation was to manufacture and sell press-on memo pads.


 MICHAEL SOLOMON

Sworn to before me this
 5th day of June, 1997.


 Notary Public

ELLEN MAHLAN
 Notary Public, State of New York
 No. 30-4822673
 Qualified in Nassau County

4171137 -4

CERTIFICATE OF INCORPORATION
OF

PRESS ON MEMO LTD.

7/23

STATE OF NEW YORK
DEPARTMENT OF STATE
FILED JUL 24 1974
TAX \$
FILING FEE \$

John J. [Signature]

Acting Secretary of State

P. S. [Signature]

Filed by:

Fritz & Solomon, Esqs.
33 South Grove Street
Freeport, New York 11520

CT-4

1974

NEW YORK STATE CORPORATION FRANCHISE TAX REPORT ARTICLE 9A, TAX LAW

(For corporations eligible to file this report, see instruction 1 on Page 2)

CALENDAR YEAR 1974 or other taxable PERIOD

BEGUN _____ 1974 ENDED _____ 19 _____

File with Corporation Tax Bureau, State Capitol, Albany, N.Y. 12227, within 2 1/2 months after close of report year. Please read instructions on Page 2 before preparing this report.

PLEASE PRINT OR TYPE		BUREAU USE
EMPLOYER IDENTIFICATION NUMBER	FILE NUMBER	

Please use pre-addressed form. Correct any error in Employer Number, address and Zip Code.

NAME TN 4053 002 8817 241 049.40
PRESS ON MEMO LTD.
NUMBER AND FRITZ ETAL
33 S GROVE ST
FREEPORT NY 11520
CITY OR TOWN, STATE AND ZIP CODE

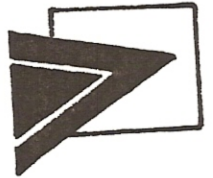
CHECK IF CHANGED
SINCE LAST REPORT

☐ ADDRESS ☐ EMPLOYER NUMBER

342

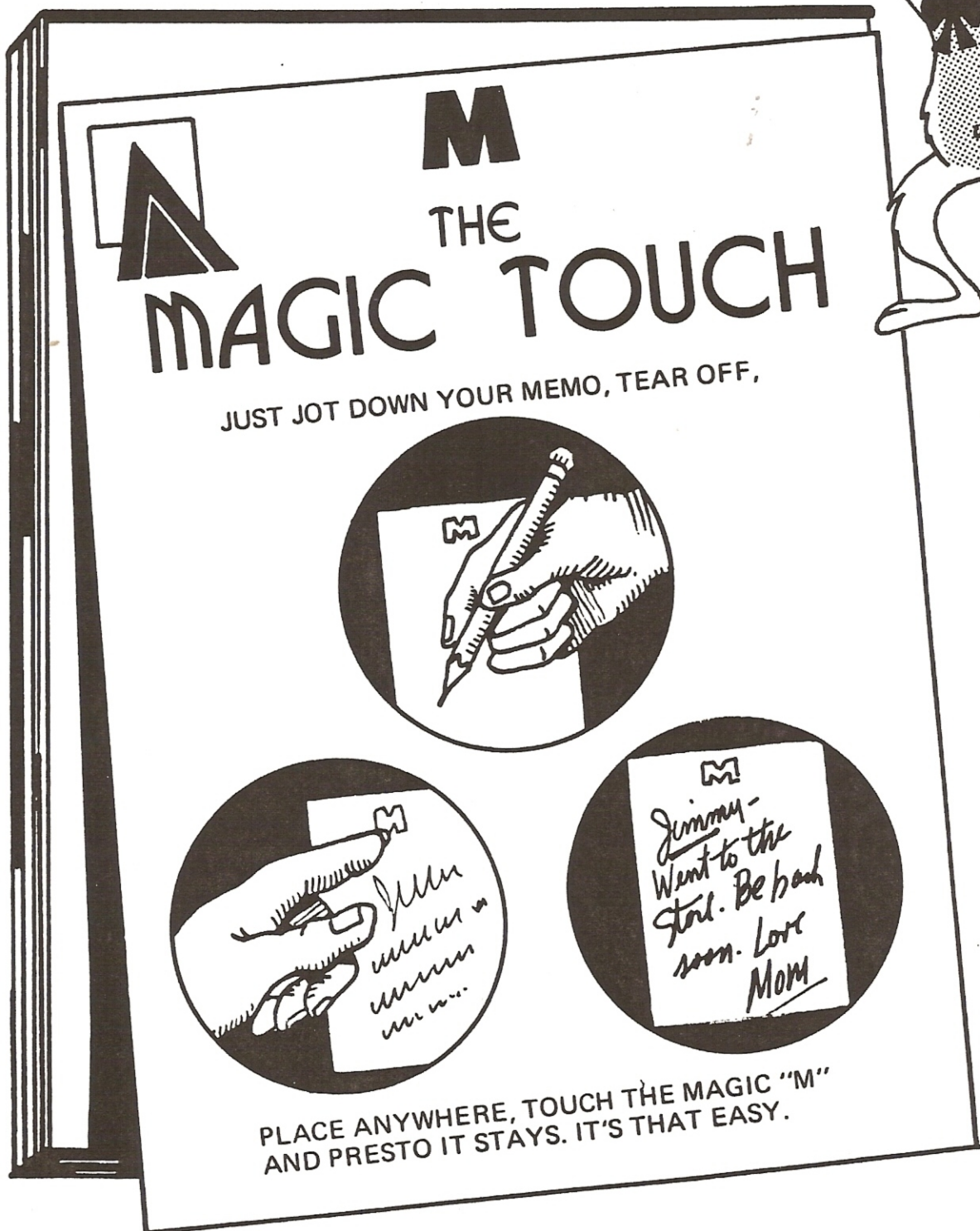
THE MAGIC • TOUCH

PRESS-ON MEMO LTD.
P.O. BOX 302
ROCKVILLE CENTRE, NEW YORK 11570



ATTENTION ATT: STATIONERY BUYER
A REVOLUTIONARY INVENTION IN STATIONARY
THAT BRINGS BIG PROFITS!

Presto!



ACTUAL SIZE

A silent secretary right at your fingertips, for the home or at business, that allows you to hang your memo without the use of tapes, pins or magnets. It's practical, it's attractive, it's easy to handle and costs very little. It also makes a nice gift.

FOR COMPLETE INFORMATION WRITE TO:

PRESS-ON MEMO :



THE MAGIC • TOUCH

YOUR INVITATION
TO INSTANT PROFIT!
IT'S PRACTICAL, IT'S ATTRACTIVE,
IT'S EASY TO HANDLE...

**JUST JOT DOWN YOUR MEMO, TEAR OFF, PLACE ANYWHERE,
TOUCH THE MAGIC "M" AND PRESTO IT STAYS. IT'S THAT EASY.
THIS NOW ALLOWS YOU TO HANG YOUR MEMO WITHOUT THE
USE OF TAPES, PINS OR MAGNETS.**

WITH OUR EXCITING ADVERTISING
CAMPAIGN REACHING A MARKET
THAT'S ENDLESS...IT ADDS UP TO BIG
PROFITS! THAT'S NOT MAGIC...
THAT'S GOOD BUSINESS.

**FOR COMPLETE INFORMATION WRITE TO:
PRESS-ON MEMO LTD. P.O. BOX 302 ROCKVILLE CENTRE, NEW YORK 11570**

Exhibit D

Trademark for Post-it Note single sided Pads was filed fraudulently by 3M on March 12, 1981 Serial number 300,787 and Registration number 1,198,694 Registered June 22, 1982. Claimed date of first use of the Post-it mark on pads was September 25, 1974.

Trademark for Post-it two sided paper and cardboard product was filed by 3M on December 29, 1975 serial number 72,879 and Registration number 1,046,353 registered August 17, 1976 for the Post-it mark "having adhesive coating on both sides thereof..." on paper and cardboard products with the very same claimed fraudulently by 3M September 25, 1974 date of first use as in the six years later application for Post-it NOTES date of first use.

NOV-03-97 03:51 PM INVENTORS.WATCH	703 534 2366	P.07 NOV-03-97 03:50 PM INVENTORS.WATCH	703 534 2366	P.06
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<p>Int. Cl.: 16 Prior U.S. Cl.: 37 United States Patent Office</p>	<p>Reg. No. 1,046,353 Registered Aug. 17, 1976</p>
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<p>TRADEMARK Principal Register</p>	<p>TRADEMARK Principal Register</p>
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<p><u>POST-IT</u></p> <p>For: PAPER AND CARDBOARD SHEET MATERIAL HAVING ADHESIVE COATING ON BOTH SIDES THEREOF FOR ATTACHMENT TO WALLS OR OTHER VERTICAL SURFACES TO HOLD DISPLAYS OR OTHER MESSAGES IN PLACE, in CLASS 16 (U.S. CL. 37). First use Sept. 25, 1974; in commerce Sept. 25, 1974.</p> <p>Ser. No. 72,879, filed Dec. 29, 1975.</p> <p>P. P. GRALNICK, Supervisory Examiner G. H. FECHTER, Examiner</p>	<p><u>POST-IT</u></p> <p>For: STATIONERY NOTES CONTAINING ADHESIVE ON ONE SIDE FOR ATTACHMENT TO SURFACES, in CLASS 16 (U.S. CL. 37). First use Sept. 25, 1974; in commerce Sept. 25, 1974. Owner of U.S. Reg. Nos. 1,046,353 and 1,046,383. Sec. 4(f).</p> <p>Ser. No. 300,787, filed Mar. 12, 1981. HENRY S. ZAK, Primary Examiner</p>
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Minnesota Mining and Manufacturing Company (Delaware corporation)
3M Center
St. Paul, Minn. 55144

Both sides coated with

Must Be wrong!
The first post-IT notes were sold in 1985...



US005194299A

United States Patent [19]

Fry

[11] **Patent Number:** **5,194,299**[45] **Date of Patent:** **Mar. 16, 1993**[54] **REPOSITIONABLE PRESSURE-SENSITIVE ADHESIVE SHEET MATERIAL**[75] **Inventor:** Arthur L. Fry, Saint Paul, Minn.[73] **Assignee:** Minnesota Mining and Manufacturing Company, St. Paul, Minn.[21] **Appl. No.:** 948,095[22] **Filed:** Dec. 31, 1986**Related U.S. Application Data**

[60] Division of Ser. No. 662,605, Oct. 19, 1984, abandoned, which is a continuation-in-part of Ser. No. 662,605, Oct. 19, 1984, abandoned.

[51] **Int. Cl.:** B32B 31/00[52] **U.S. Cl.:** 427/208.6; 427/421; 427/284; 427/285; 428/194; 428/198; 428/201; 428/202; 428/211; 428/343[58] **Field of Search:** 428/194, 198, 211, 343, 428/40, 202, 201; 427/208.6, 421, 284, 285[56] **References Cited****U.S. PATENT DOCUMENTS**

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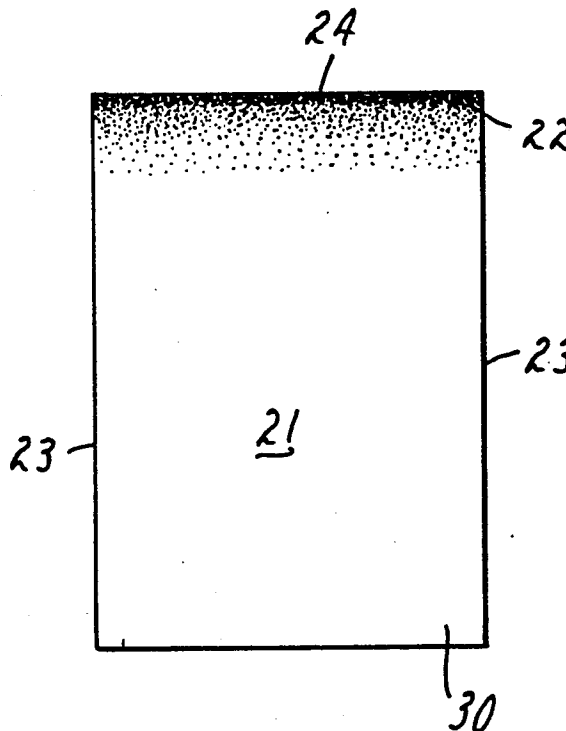
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1541311 2/1979 United Kingdom .

Primary Examiner—Alexander S. Thomas*Attorney, Agent, or Firm*—Gary L. Griswold; Walter N. Kirn; Thomas J. Odar[57] **ABSTRACT**

Pressure-sensitive adhesive sheet material having the ability to be applied to paper and removed therefrom without lifting fibers or delaminating the paper. The otherwise conventional pressure-sensitive adhesive is applied to the backing by spraying, resulting in a non-repetitive pattern of adhesive islands.

5 Claims, 1 Drawing Sheet

U.S. Patent

Mar. 16, 1993

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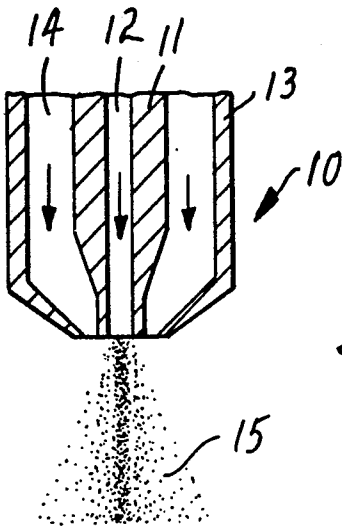


FIG. 1

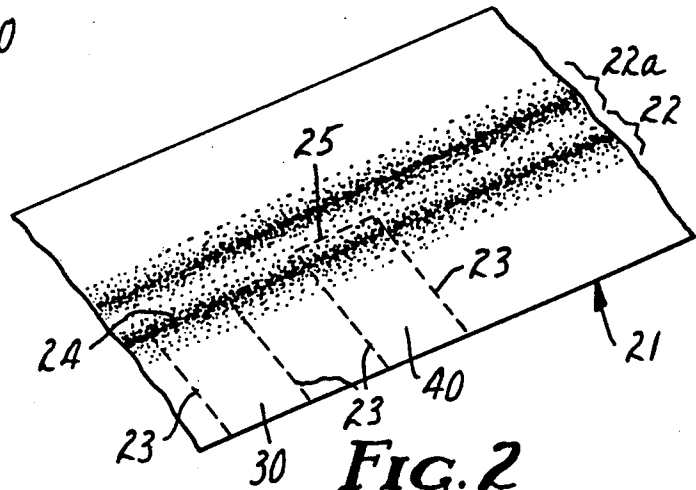


FIG. 2

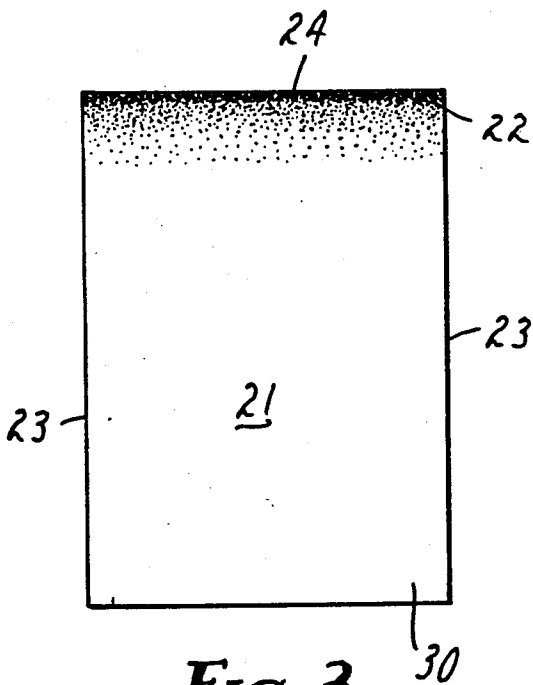


FIG. 3

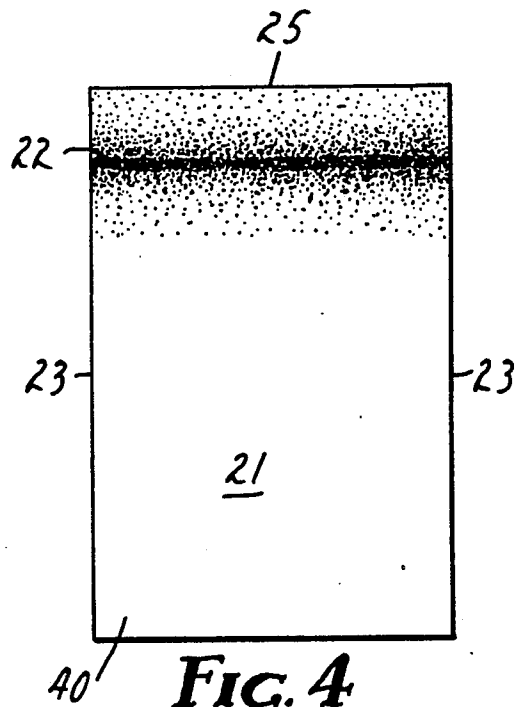


FIG. 4

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REPOSITIONABLE PRESSURE-SENSITIVE ADHESIVE SHEET MATERIAL

CROSS REFERENCE TO RELATED APPLICATION

This application is a division and continuation-in-part of Ser. No. 662,605, filed Oct. 19, 1984 now abandoned.

BACKGROUND OF THE INVENTION

This invention relates to normally tacky and pressure-sensitive adhesive sheet material and is particularly concerned with repositionable products.

In the mid-1970's applicant's assignee introduced repositionable adhesive tapes and note papers, which found an immediate acceptance and today provide a substantial volume of business. The adhesive utilized in these products, typically present in a narrow band adjacent one edge of the sheet material, consists essentially of an adhesive binder layer containing numerous infusible, solvent-dispersible tacky elastomeric microspheres that typically have a diameter of 50-75 micrometers. In another embodiment of this type of product, bulletin boards are surfaced with sheet material bearing the same repositionable adhesive, so that notices, pictures, clippings, etc. can be temporarily adhered, removed, and repositioned; see, e.g., U.S. Pat. No. 3,857,731.

Products of the type described in the preceding paragraph can be adhered to almost any substrate, including paper (even such weak paper as newsprint), readily removed without delaminating the substrate, and subsequently repositioned. The force required to peel these products from a paper substrate is maintained in the approximate range of 8 to 80 (preferably 10 to 50) grams per centimeter width; products having significantly lower peel adhesion (e.g., less than 8 g/cm width) generally lack the ability to resist inadvertent removal, often falling off. Products having significantly higher peel adhesion (e.g., more than 80 g/cm) on the other hand, tend to tear or delaminate weak papers at normal removal rates. Application of the adhesive coating so as to achieve consistent peel adhesion values requires considerable knowhow, and the adhesive compositions themselves are relatively expensive to manufacture.

Numerous attempts have been made to achieve the results obtainable with microsphere adhesives by substituting more conventional pressure-sensitive adhesives (psas), which typically have continuous-coat (100% coverage) peel adhesion values, when applied to untreated paper, on the order of 100-1000 g/cm. width. (Representative adhesion values include the following: matte finish acetate tape, 107 g/cm; masking tape, 227 g/cm; book repair tape, 443 g/cm; package sealing tape, 830 g/cm; filament tape, 937 g/cm.) One approach has been to use a psa having inherently low tack, but it has been found difficult, if not impossible, to maintain consistent peel adhesion values, the nature of the note paper backing and the thickness of the adhesive layer both profoundly affecting performance. Another approach has been to apply a thinner coating than normal, it being recognized that this will reduce peel adhesion. Unfortunately, however, it is almost impossible to prepare consistent coatings having removal values in the 10-50 g/cm range; even when this can be done, adhesion will frequently increase upon extended contact to a degree sufficient to cause tearing or delamination upon attempted removal.

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Others have tried to obtain the desired degree of adhesion by locally deactivating portions of a full coating of a psa, as taught in U.S. Pat. No. 2,515,423, but this technique has likewise proved difficult to control. The same problems are encountered in attempting to locally mask portions of a full coating of a psa, as taught in U.S. Pat. Nos. 1,944,834, 2,000,475, 3,900,642, 3,967,624, and 4,063,559, as well as in British Patent No. 1,541,311.

The prior art has also suggested applying pressure-sensitive adhesive to only portions of a backing, leaving other portions free from adhesive. Thus, it has been proposed to make spaced adhesive stripes extending in either the machine direction (U.S. Pat. No. 2,349,709) or the cross direction (U.S. Pat. Nos. 2,386,731 and 3,811,438), as well as products having spaced adhesive spots (U.S. Pat. Nos. 3,174,888 and 3,741,786). By and large, however, the spots were so large that attempted removal of the tape from newsprint will cause tearing or delamination. Prior to the present invention, then, it is believed that there has never existed a product having performance equivalent to that of the microsphere adhesives referred to above, but made with conventional pressure-sensitive adhesives.

BRIEF SUMMARY

The present invention provides a removable and repositionable adhesive product* comprising a substrate (especially sheet material such as paper) bearing on one surface a discontinuous non-repetitive** adhesive coating comprising first areas where psa is exposed and second areas where psa is not exposed. The psa is sufficiently adherent to newsprint that if sheet material having a continuous coating of the psa is applied to sheet backing in the normal manner and the adhesive surface then placed in contact with a sheet of newsprint, it cannot be peeled away at normal rates (e.g., 10-15 cm/sec) without delaminating the newsprint. The invention is based on the application of conventional pressure-sensitive adhesives to a substrate in certain critical patterns where discrete spaced areas of adhesive are carefully controlled as to size, thickness, and percentage of substrate covered. The resultant product is not only simple and economical to manufacture but also offers the first practical alternative to the use of the tacky microsphere adhesives.

* The term "removable and repositionable" is intended to refer not only to products which can be temporarily adhered to, removed from, and repositioned on paper sheets but also to products to which paper sheets can be temporarily adhered, removed, and repositioned.

** The term "non-repetitive" means that the adhesive pattern is random, as opposed to the repeating pattern obtained by using a rotogravure roll or other printing equipment.

More specifically, it has been found that the adhesive used in practicing the invention should cover about 10 to about 85% (preferably about 20 to about 60%) of the area over which adhesive is applied. Individual adhesive "islands" should be about 0.01-0.15 mm (preferably about 0.02-0.10 mm) thick and at least roughly circular, having a diameter no greater than 0.02-1.5 mm (preferably on the order of 0.05-0.08 mm). In some instances adjacent islands may join together to form a short chain or larger island, provided that at least one dimension does not exceed the stated limits. Within the limits specified, the numerical values are interrelated, depending also on the tackiness of the specific adhesive employed. To illustrate, an extremely tacky adhesive should be so applied that it is present in smaller islands or a thinner coating, or occupies a lower percentage of the backing, than a less tacky adhesive. The adhesive can be applied as from an aqueous dispersion or a solution in organic

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solvent, or perhaps as either a hot melt or a thick monomeric syrup that is thereafter polymerized in situ, e.g., as taught in U.S. Pat. No. 4,181,752. Even where aqueous dispersions (which are presently preferred) are applied to a paper backing, there is usually no evidence of irregular shrinking, distortion, or cockling. Coating and drying or curing procedures for "island"-coated adhesives are faster, require less energy, result in lower paper distortion, and use less adhesive than for full-coated adhesives. The resultant adhesive sheet material can be adhered to paper, allowed to remain in contact therewith for two weeks at room temperature and then removed without visibly damaging the paper. Preferred embodiments of the invention display the same peel removal force of 10-50 g/cm characteristic of microsphere adhesives, enabling them to be adhered to newsprint for extended periods of time without delaminating it upon removal.

A further embodiment of the invention includes a sheet backing or other substrate in which the population density of the adhesive islands in the discontinuous coating varies, e.g., from low at one edge of the coating pattern and high at the other or low at both edges and high in the central portion. When such a pattern is provided at the edge of a sheet of paper, so that the population density of the adhesive islands is lowest adjacent the uncoated portion of the sheet, the sheet will remain flat when it is applied to a substrate, removed, and replaced. This highly desirable performance feature is frequently not found in conventional products. For all papers, there is some adhesion force that will cause the paper to curl when a note is pulled away from a surface at an angle of 90° or greater. With a tapered adhesion profile, there is always a part of the adhesive that is too low in adhesion to curl the paper, but high enough to hold the curled portion down when it is readhered.

The desirable results described above are attained by the simple but highly unconventional process of spraying the adhesive onto the sheet backing. When adhesive is applied from a spray head in fixed position above a moving web of paper, a strip of discontinuous adhesive, perhaps 1-2.5 cm wide, is applied; masks may be employed to keep overspray from other areas. Typically the edges of the adhesive strip have a lower population density than does the center. This effect is caused by the inherent characteristics of the spray pattern emanating from a spray head, where the spacing between droplets is least at the center, gradually increasing radially outward therefrom.

BRIEF DESCRIPTION OF THE DRAWING

Understanding of the invention will be enhanced by referring to the accompanying drawing, in which like numbers refer to like parts in the several views, and in which:

FIG. 1 is a vertical cross-sectional view of a spray head, showing the distribution of particles emanating therefrom;

FIG. 2 is a perspective view of a sheet that has been provided with two stripes from spaced adhesive spray heads;

FIG. 3 is a plan view of the rear surface of a sheet that has been provided with a sprayed adhesive strip adjacent one edge; and

FIG. 4 is a plan view of the rear surface of a sheet similar to that of FIG. 3 except that the distribution of adhesive islands is different.

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DESCRIPTION OF PRESENTLY PREFERRED EMBODIMENTS

In the drawing, spray unit 10 includes nozzle 11, having central channel 12, through which adhesive is supplied. Surrounding nozzle 11 and spaced radially therefrom is air cap 13, defining an annular passage through which air is supplied. As the adhesive emerges from channel 12, the annular air stream emitted from channel 14 breaks the adhesive into a cloud of small droplets 15. The pattern assumed by droplets 15 is generally circular, the greatest concentration being at the central portion, gradually decreasing to zero at the periphery. The diameter of the spray pattern is directly related to the distance between spray unit 10 and the substrate toward which adhesive droplets 15 are directed. The size of droplets 15 can be altered by appropriately adjusting spray unit pressures, and the coating weight applied to a moving substrate can be adjusted by varying either the rate at which the spray is applied or the speed at which the substrate moves. Thus, the application of a pressure-sensitive adhesive with a spray unit offers great versatility in the coating applied. Speaking in general terms, adhesive islands having smaller diameter but greater thickness can be obtained by spray coating than by printing.

For purposes of the invention, it is important that the adhesive droplets be small, e.g., on the order of 0.02 to 0.2 mm in diameter. Larger droplets result in an adhesive coating that not only tends to cause "raspy," or erratic, removal of a coated sheet from a paper substrate but also is more likely to pull paper fibers. It is much easier to produce articles coated with small adhesive "islands" by spray techniques than by conventional printing methods. It is also far easier to apply adhesive droplets in a close-spaced pattern by spray coating than by printing methods. Further, printed patterns are difficult to maintain consistently, since the application of adhesive is affected by wear of the printing roll, as well as by the unavoidable consequence of having dried adhesive or other contaminants fill in part of the cells on a rotogravure roll or the holes in a screen. It is easy to distinguish a sprayed pattern from a roll coated or printed pattern, since the latter two are repetitive, and the sprayed pattern is not.

Another consideration is the fact that spray equipment is considerably less expensive than printing equipment. Additionally, since the spray head does not contact the substrate to be coated, articles that are fragile or have irregular surfaces may be coated, whereas printing methods, especially at high speeds, cannot be effectively employed in this manner. Thus the present invention enables the preparation of note pads, labels, paper napkins, and other items that require low adhesion levels and removability.

Spray unit 10 may be of any of several types, including the so-called airless spray head. For commercial application, however, it is most practical to use spray heads that do not require frequent cleaning.

FIG. 2 shows a portion of a web 21 that has been adhesive-coated using a pair of spray heads 10 to apply a pair of adhesive stripes 22 and 22a extending along the machine direction of web 21. Consistent with the spray pattern shown in FIG. 1 and discussed above, the population density of adhesive droplets 15 is highest at the center of stripes 22, 22a, gradually decreasing as the distance from the center increases. By die-cutting along dotted lines 23, 24 or 23, 25 shown in FIG. 2, one can

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then obtain removable repositionable notes 30, 40 of the type shown, respectively, in FIGS. 3 and 4. It will be observed that in each case the population density of adhesive droplets in adhesive strips 22 is lowest immediately adjacent the uncoated part of note 30 or 40, leading to an interesting advantage when the note is either removed from a pad of such notes or applied to a substrate, removed, and subsequently reapplied. When the user of note 30 or 40 removes it, typically at an angle of 90°–180°, there will be some point where the population density of the adhesive islands is high enough that the note will deform or curl, adhesive side out, along the line of greatest population density of the adhesive islands. When the note is then applied or reapplied to a substrate, the less densely populated portion of the adhesive strip 22 serves to rebond the note in a flat position. In contrast, conventionally coated notes remain curled when reapplied, causing an unsightly appearance and increasing the likelihood that they will snag on overlying sheets of paper and possibly be removed inadvertently. Others have attempted to cope with this problem by coating adhesive strips in which the edge adjacent the uncoated portion of the note has a saw-tooth pattern; although effective to a degree, this technique increases the difficulty of applying the adhesive strip.

Note 30 is obtained by cutting along the densest central portion of adhesive strip 22. If desired, however, note 40 may be obtained by cutting along the opposite edge of adhesive strip 22, where the density of the adhesive islands is also low. One advantage of the product of FIG. 4 is that there is a reduced tendency for the cutting equipment to become gummed up with adhesive during the process of manufacture.

It will be recognized that if desired, spray units 10 could be so positioned above a moving web as to achieve an adhesive coating of substantially the same non-repeating pattern over whatever portion of the web it is desired to coat.

As an aid to understanding and practicing the invention, various measuring and testing techniques employed will now be described.

Percent Adhesive Coverage

The adhesive islands are first identified by rubbing black artists' charcoal into the surface of a soft rubber sheet and then pressing the adhesive onto the blackened surface, using a 3.8-cm diameter rubber roller to ensure intimate contact. The charcoal adheres to the surface of the adhesive areas but does not adhere to the uncoated portions of the paper backing. Using obliquely directed light, an image analyzing device, such as the Cambridge "Imanco" Image Analyzer No. 720, is then used to examine 16 fields, each 5 mm × 5 mm, in the densest part of the spray pattern and the 16 readings averaged.

Droplet Size Measurement

The adhesive-coated surface is examined using a 100-power microscope having an optical comparator grating. Adhesive islands can be viewed and measured directly.

Thickness Measurements

Strips approximately 1 mm wide are cut from the adhesive-coated sheet material, bent into a V shape, and positioned edgewise on the stage of the microscope used for width measurements. The height of the adhesive

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islands above the surface of the paper backing can be measured directly.

Peel Adhesion

The adhesive to be tested is first applied to a surface to which it will adhere tenaciously, e.g., anodized aluminum or alumina-surfaced biaxially oriented polyester film such as that described in U.S. Pat. No. 4,190,321. A 2.54-cm × 25.4-cm strip of 25 micrometer biaxially oriented polyethylene terephthalate film is then applied to the adhesive surface and rolled down with two passes of a 2-kg roller. Using a tensile testing machine, the force required to pull the polyester strip from the adhesive surface at a 90° angle at a rate of 30.5 cm per minute is then determined. Peel adhesion tests are run both immediately after sample preparation and after a specified delay that allows the adhesion bond to stabilize.

Delamination Strength

To determine the delamination strength of various types of paper, a 2.54-cm strip of 25-micrometer polyester film having a full coating of acrylate-based pressure-sensitive adhesive is placed in contact with the surface of the paper and rolled down with two passes of a 2-kg roller. The adhesive-coated strip is then pulled away from the paper at a 90° angle at a rate of 30.5 cm per minute. (It is, of course, necessary to use tape having an adhesion to the paper being tested greater than the delamination strength of the paper itself). It is interesting to note that the force required to initiate tearing or delamination of the paper is greater than the steady-state force required to continue tearing or delamination after it has occurred. This phenomenon may show why a discontinuous adhesive coating on the tape product permits its removal from a paper surface without delamination, even at forces that would cause delamination if the adhesive coating were continuous. Although a discontinuous adhesive coating may pull loose other individual fibers (which are typically 4–5 mm long and 0.01–0.03 mm in diameter), there is insufficient contact between any given adhesive island and the several adjacent fibers to permit the initial delamination to occur. In this regard, it has been found that the shape of the adhesive islands has an effect on their tendency to initiate tearing. For example, circular adhesive islands are less likely to tear paper than parallel linear adhesive islands whose width is the same as the diameter of the circular islands, especially when removal forces are exerted parallel to their long dimension.

Using the test just described, the force required to initiate tearing or delamination and the force required to continue delamination or tearing that was previously commenced for several types of paper are, respectively, as follows: manila file folder, 341 g/cm, 309 g/cm; wood-free No. 4 sulfite typewriter bond weighing 4.68 g/m², 297 g/cm, 116 g/cm; newsprint, 177 g/cm, 79 g/cm.

In the following illustrative but non-limiting examples, all parts are by weight unless otherwise noted.

EXAMPLE 1

The adhesive employed in this example was a 57% solids high-tack aqueous isoamylacrylate emulsion, commercially available from Rohm & Haas under the registered trademark "Rhoplex" N619. This adhesive was applied under a pressure of about 50 kPa to an air atomizing gun (Model CFA 700, available from A. C. Wallberg Company), air being supplied so as to dis-



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REPOSITIONABLE PRESSURE-SENSITIVE ADHESIVE SHEET MATERIAL

PATENT #	APPLICATION #	FILING DATE	ISSUE DATE
5194299	06948095	12/31/1986	03/16/1993

Payment Window Status

WINDOW	STATUS	FEES
11.5 Year	Closed	Paid

**No maintenance
fees are due.**

Window	First Day to Pay	Surcharge Starts	Last Day to Pay	Status	Fees
3.5 Year	03/16/1996	09/17/1996	03/17/1997	Closed	Paid
7.5 Year	03/16/2000	09/19/2000	03/16/2001	Closed	Paid
11.5 Year	03/16/2004	09/17/2004	03/16/2005	Closed	Paid

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Entity Status	UNDISCOUNTED
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United States Patent**Silver****[15] 3,691,140****[45] Sept. 12, 1972****[54] ACRYLATE COPOLYMER
MICROSPHERES****[72] Inventor: Spencer Ferguson Silver, 3 M
Center, St. Paul, Minn. 55101****[22] Filed: March 9, 1970****[21] Appl. No.: 17,880****[52] U.S. Cl.260/78.5, 117/155, 117/161,
260/29.6, 260/30.4, 260/31.2, 260/32.8,
260/33.4, 260/33.6, 260/79.3, 260/80.73,
260/80.8, 260/80.81, 260/86.1 R, 260/86.1
N****[51] Int. Cl.C08f 15/26****[58] Field of Search260/86.1 N, 79.3, 78.5, 80.73,
260/80.8, 80.81****[56] References Cited****UNITED STATES PATENTS**2,892,822 6/1959 Gray et al.260/86.1 N
3,257,478 6/1966 Jubilee et al.260/86.1 N3,385,839 5/1968 Honig et al.260/86.1 N
3,428,617 2/1969 Sobolev260/86.1 N
3,485,806 12/1969 Bloomquist et al. ...260/86.1 N
3,527,802 9/1970 Slagel260/86.1 N**Primary Examiner—Harry Wong, Jr.****Attorney—Kinney, Alexander, Sell, Steldt & Delahunt****[57] ABSTRACT**

Infusible, solvent-dispersible, solvent-insoluble, inherently tacky, elastomeric copolymer microspheres consist essentially of about 90 percent to about 99.5 percent by weight of at least one alkyl acrylate ester and about 10 to about 0.5 percent by weight of at least one monomer selected from the group consisting of substantially oil-insoluble, water-soluble, ionic monomers and maleic anhydride. The microspheres are prepared by aqueous suspension polymerization utilizing emulsifier in an amount greater than the critical micelle concentration in the absence of externally added protective colloids or the like.

19 Claims, No Drawings

3,691,140

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ACRYLATE COPOLYMER MICROSPHERES

BACKGROUND OF THE INVENTION

This invention relates to inherently tacky, elastomeric, solvent-dispersible, solvent-insoluble, acrylate copolymer and a process of preparing the copolymer.

Aerosol spray adhesives have recently found commercial importance in the graphic arts for adhering paper to various substrates, as well as numerous other uses. Such adhesives have many desirable properties. For instance, they permit paper to be removed from a substrate to which it is adhered, without tearing; however, they do not permit rebonding. These adhesives generally comprise solvent dispersions of cross-linked rubbers or acrylates. Such polymers, while commercially utilizable, are not completely satisfactory because the cross-linking reaction is difficult to control and often provides soluble or partially soluble polymers. Soluble polymers are undesirable for spray adhesives having a non-volatile content above 10 percent because they do not atomize well and therefore fail to spray or form a "cobweb" spray pattern. Also, such polymers form agglomerates of random size, the large particles often plugging the spray nozzle orifice. Further, the polymer particles, when dry, agglomerate and are dispersible only with difficulty.

Despite the desirability of inherently tacky, elastomeric polymers which are solvent-dispersible, solvent-insoluble, and of uniformly small size, such a product has never heretofore existed.

SUMMARY

The invention provides inherently tacky, elastomeric, polymers which are uniformly solvent-insoluble, solvent-dispersible, of small size, and ideally suited for use in aerosol spray adhesives. The polymers easily disperse in various solvents to provide non-plugging suspensions which spray without cobwebbing. The polymers permit bonding of paper and other materials to various substrates, permit easy removal of bonded paper from the substrate without tearing, and also permit subsequent rebonding of the paper without application of additional adhesive.

The invention comprises infusible, solvent-dispersible, solvent-insoluble, inherently tacky, elastomeric, acrylate copolymer microspheres consisting essentially of about 90 to about 99.5 percent by weight of at least one alkyl acrylate ester and about 10 to about 0.5 percent by weight of at least one monomer selected from the group consisting of substantially oil-insoluble, water-soluble, ionic monomers and maleic anhydride. Preferably, the microspheres comprise about 95 to about 99 percent by weight acrylate monomer and about 5 to about 1 percent by weight ionic monomer, maleic anhydride, or a mixture thereof. The microspheres are prepared by aqueous suspension polymerization utilizing emulsifier in an amount greater than the critical micelle concentration in the absence of externally added protective colloids or the like.

Solvent suspensions of these microspheres may be sprayed by conventional techniques without cobwebbing or may be incorporated in aerosol containers with suitable propellants such as iso-butane, isobutylene, or the Freons. The tacky microspheres provide a pressure-sensitive adhesive which has a low degree of

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adhesion permitting separation, repositioning and rebonding of adhered objects. Additionally, these polymers are readily removable from surfaces to which they have been applied, much as rubber cements are removable by mere rubbing. Further, the tacky spheres resist permanent deformation, regaining their spherical shape upon release of pressure. They also exhibit a very low film or tensile strength, less than about 10 psi.

The alkyl acrylate ester monomer portion of the copolymer microspheres may comprise one ester monomer or a mixture of two or more ester monomers. Similarly, the water-soluble, substantially oil-insoluble monomer portion of the copolymer microspheres may comprise maleic anhydride alone, an ionic monomer alone, a mixture of two or more ionic monomers, or a mixture of maleic anhydride with one or more ionic monomers.

The alkyl acrylate ester portion of these microspheres consist of those alkyl acrylate monomers which are oleophilic, water-emulsifiable, of restricted water-solubility, and which, as homopolymers, generally have glass transition temperatures below about -20°C . Alkyl acrylate ester monomers which are suitable for the microspheres of the invention include iso-octyl acrylate, 4-methyl-2-pentyl acrylate, 2-methylbutyl acrylate, sec-butyl acrylate, and the like. Acrylate monomers with glass transition temperatures higher than -20°C . (i.e., tert-butyl acrylate, iso-bornyl acrylate or the like) may be used in conjunction with one of the above described acrylate ester monomers.

The water-soluble ionic monomer portion of these microspheres is comprised of those monomers which are substantially insoluble in oil. By substantially oil-insoluble and water-soluble it is meant that the monomer has a solubility of less than 0.5% by weight and, a distribution ratio at a given temperature (preferably $50^{\circ}\text{--}65^{\circ}\text{C}$.), of solubility in the oil phase monomer to solubility in the aqueous phase of less than about 0.005, i.e.,

$$D = \frac{\text{Total concentration in organic layer}}{\text{Total concentration in aqueous layer}}$$

Table I illustrates typical distribution ratios (D) for several water-soluble, substantially oil-insoluble ionic monomers.

TABLE I

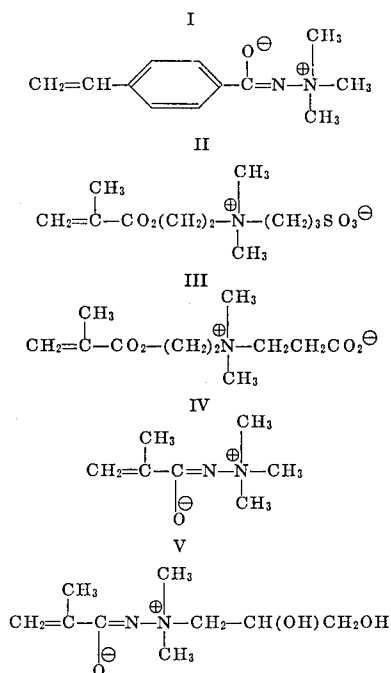
Oleophilic Monomer	Temp. $^{\circ}\text{C}$.	Hydrophilic Monomer	D
iso-octyl acrylate	50	1,1-dimethyl-1(2-hydroxypropyl)amine methacrylimide	0.005
do	50	1,1,1-trimethylamine methacrylimide	0.0015
do	65	do	0.003
do	50	N,N-dimethyl-N-(β -methacryloxyethyl) ammonium propionate betaine	<0.002
do	65	do	0.003
do	65	4,4,9-trimethyl-4-azonia-7-oxo-8-oxadec-9-ene-1-sulfonate	<0.002
do	65	1,1-dimethyl-1(2,3-dihydroxypropyl)amine methacrylimide	0.0015
do	65	sodium acrylate	<0.001
do	65	sodium methacrylate	<0.001
do	65	ammonium acrylate	<0.001
do	65	maleic anhydride	0.02

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Ionic monomers conforming to the preceding criteria include sodium methacrylate, ammonium acrylate, sodium acrylate, (I) trimethylamine p-vinyl benzimide, (II) 4,4,9-trimethyl-4-azonia-7-oxo-8-oxa-dec-9-ene-1-sulphonate, (III) N,N-dimethyl-N-(β -methacryloxyethyl) ammonium propionate betaine, (IV) trimethylamine methacrylimide, (V) 1,1-dimethyl-1(2,3-dihydroxypropyl)amine methacrylimide; any zwitterionic monomer having the preceding solubility requirements, and the like. Structural formulas of these monomers are as follows:



The copolymer microspheres are small in size, having diameters in the range of about 1 to about 250 microns, the diameter of the majority of the spheres falling in the range of about 5 to about 150 microns. The spheres are normally tacky and elastomeric, are insoluble in organic solvents, and form suspensions in all common solvents except highly polar solvents such as water, methanol, and ethanol. Typical useful solvents are ethyl acetate, tetrahydrofuran, heptane, 2-butanone and other ketones, benzene, cyclohexane, esters, isopropanol, and higher alcohols. When dispersed, the microspheres absorb the solvent and swell to about twice their original diameter, or about eight times their original volume. After dispersion, the microspheres, which contain about 80 percent solvent, remain homogeneously dispersed for extended periods of time. When the dispersed microspheres are sprayed or coated on a surface, the solvent quickly evaporates, the microspheres shrinking to approximately their original size. A force applied directly to one of the polymer spheres will deform it; however, the spherical shape is reassumed upon release of the stress. Upon being heated, the spheres do not melt or flow, but retain their integrity until carbonization temperature is reached. Tack properties of the microspheres may be altered by inclusion of various resins in the solvent or aqueous suspensions of microspheres.

The microspheres of the invention are prepared by an aqueous suspension polymerization technique utilizing anionic emulsifiers in an amount greater than the critical micelle concentration in the absence of protective colloids, finely divided inorganic solids, or the like. Heretofore, suspension polymerizations conducted in the absence of such materials and at high emulsifier levels, i.e., above the critical micelle concentration, have yielded latices of extremely small particle size, which are solvent-soluble, fusible particles. The critical micelle concentration is here defined as that minimum concentration of emulsifier necessary for the formation of micelles. Critical micelle concentration is slightly different for each emulsifier, usable concentrations ranging from about 1.0×10^{-4} to about 3.0 moles/liter. Non-ionic emulsifiers may also be included so long as an anionic emulsifier is present and predominates. Catalysts for polymerizing the monomers to provide the spheres of the invention are those which are normally suitable for free-radical polymerization of acrylate monomers and which are oil-soluble and of very low solubility in water such as, for example, benzoyl peroxide. Use of a water-soluble catalyst causes formation of substantial amounts of latex, the extremely small particle size and solubility of latex particles being undesirable. Concentration of catalyst will affect sphere quality and, therefore, should be on the order of about 0.15 to about 0.6 percent by weight, of the total suspension, preferably about 0.25 to about 0.45 percent. Catalyst concentrations below about 0.15 percent may cause agglomeration of spheres, whereas a concentration greater than 0.6 percent results in low molecular weight polymer which does not exhibit all of the desired properties.

Following polymerization, the aqueous suspension of copolymer microspheres is stable to agglomeration or coagulation under room temperature conditions. The copolymer suspensions may have non-volatile solids contents from about 10 to about 50 percent by weight. Upon prolonged standing, the suspensions will separate into two phases, the lower phase being aqueous and substantially free of polymer, the upper phase being an aqueous dispersion of polymer spheres. Decantation of the upper phase provides a low viscosity aqueous suspension having a non-volatile solids content on the order of about 75 percent which, if shaken with water, will readily redisperse.

If desired, the aqueous dispersion of microspheres may be utilized immediately following polymerization to provide inherently tacky coatings or adhesives. The aqueous dispersion may be coagulated with methanol, saturated salt solutions, or the like, followed by washing and drying. These dried polymer spheres, with sufficient agitation, will readily suspend in the previously mentioned wide variety of common organic solvents. Once the polymer is dried however, it is not redispersible in water.

The shrinkage of individual microspheres during drying when in a coated continuous layer results in a porous coating of microspheres having particular utility for such items as surgical dressings or draperies, where passage of air and water vapor through the adhesive coating is necessary, conventional adhesives generally being continuous and retarding passage of air and water vapor.

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DESCRIPTION OF PREFERRED EMBODIMENTS

EXAMPLE 1

This example illustrates a general method by which infusible, solvent-dispersible, solvent-insoluble, inherently tacky, elastomeric copolymer microspheres are prepared. A 3-liter indented resin flask fitted with mechanical stirrer was charged with 410 gms (90 mole percent) iso-octyl acrylate, 38 gms (10 mole percent) trimethylamine methacrylimide, 1500 ml deoxygenated distilled water, and 20 gms alkyl arylpolyethylene oxide sodium sulfonate (commercially available from the Rohm and Haas Company under the trade designation "Triton" X-200). The flask was purged with nitrogen, 1.5 gms benzoyl peroxide added, and the mixture heated to 66°C. and stirred vigorously (about 500 rpm) for 20 hours at 66°C. under nitrogen.

At the end of the 20 hours, the suspension was cooled to 20°C. and filtered through cheesecloth to remove agglomerates, and the solid polymer recovered by coagulation and washing with methanol, to provide a 95-98 percent yield of discrete microspheres ranging in diameter from about 10 to about 150 microns. The copolymer spheres were found to be dispersible, but insoluble in, iso-propanol, ethyl acetate, tetrahydrofuran, 2-butanone, benzene, and cyclohexane. Each of these dispersions, when placed in an aerosol container with propellant, was found to provide an excellent spray adhesive which sprayed without plugging or cobwebbing to provide a tacky adhesive layer which readily bonded paper but, permitted the paper to be removed, repositioned and rebonded. The microspheres were removable from the surface on which they were sprayed with an art gum eraser.

Films were cast from each of the above-mentioned dispersions, dried, and found to be of very low tensile strength and comprised of aggressively tacky spherical particles.

EXAMPLE 2

A 500 ml indented 3-neck flask fitted with a stirrer was charged with 150 ml of deoxygenated distilled water, 47.5 gms of iso-octyl acrylate, 2.5 gms of trimethylamine methacrylimide, 1.0 gms of ammonium lauryl sulfate (commercially available from the Alcolac Chemicals Co. under the trade designation "Sipex A"), and 0.15 g. of benzoyl peroxide. The mixture was heated to 65°C., maintained for 20 hours with rapid stirring (about 550 rpm), cooled to 20°C., and filtered through cheesecloth to provide a suspension of tacky copolymer microspheres on the order of 10 to 180 microns in diameter. After coagulation and washing with methanol, the tacky, elastomeric microspheres were found to be insoluble in, but dispersible in tetrahydrofuran, 2-butanone, and heptain.

EXAMPLES 3-10

These examples, all of which were prepared utilizing the equipment and general procedure outlined in Example 2, illustrate use of various emulsifiers and ionic monomers. Deoxygenated distilled water (150 ml), 0.15 gm of benzoyl peroxide, and the components shown in Table II were utilized in the polymerization and the polymer recovered by the techniques set forth in Example 2. The microspheres were found to be in-

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herently tacky and pressure-sensitive, insoluble, infusible, and dispersible in organic solvents.

EXAMPLES 11-15

These examples, all of which were prepared utilizing the equipment and general techniques outlined in Example 2, illustrate use of various alkyl acrylate ester monomers for preparation of the copolymer microspheres of the invention. Deoxygenated distilled water (150 ml), 0.15 gm of benzoyl peroxide, and the components shown in Table III were utilized in the polymerization and the polymer recovered by the techniques set forth in Example 2. The microspheres, after polymerization and recovery, were found to be inherently tacky and pressure-sensitive, solvent insoluble, infusible, and solvent dispersible.

TABLE II

Example	Iso-octyl acrylate, g.	Emulsifier, g.	Ionic monomer	Polymer particle size, microns
3	45	2g. alkyl-arylpolyethylene oxide sodium sulfonate	5g. trimethylamine p-vinylbenzimidazole	1-50
4	do	do	5g. 1-(2,3-dihydroxypropyl)-1,1-dimethylamine methacrylimide	1-120
5	do	do	5g. N,N-dimethyl-N-(β-methacryloxyethyl)ammonium propionate betaine	20-150
6	49	1g. ammonium lauryl sulfate	1g. ammonium acrylate	6-52
7	do	do	1g. N,N-dimethyl-N-(β-methacryloxyethyl)ammonium propionate betaine	—
8	do	do	1g. 4,4,9-trimethyl-4-azonia-7-oxo-8-oxa-dec-9-ene-1-sulfonate	6-80
9	do	1g. sodium p-dodecyl benzene sulfonate	1g. sodium acrylate	3-39
10	45	do	5g. maleic anhydride	6-39

TABLE III

Example	Alkyl Acrylate Monomer gms.	Wetting agent, gm.	Ionic Monomer	Polymer particle size, microns
11	45g. 4-methyl-2-pentyl acrylate	2g. alkyl-arylpolyethylene oxide sodium sulfonate	5g. trimethylamine methacrylimide	10-80
12	45g. 2-methyl butyl acrylate	1g. p-dodecyl benzene sulfonate	5g. maleic anhydride	1-15
13	22.5g. iso-octyl-acrylate;	1g. ammonium lauryl sulfate	5g. trimethylamine methacrylimide	6-78

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14	methyl-2-pentyl acrylate 22.5g. iso-octyl acrylate; 22.5g. tert-butyl acrylate	do	do	10-80
15	18g. 4-methyl-2-pentyl acrylate; 27 g., iso-bornyl acrylate	do	do	10-140
16 *	90g. iso-octyl acrylate	4g. alkyl aryl polyethylene oxide sodium sulfonate	10g. trimethylamine methacrylimide	10-150

* 100 ml of deoxygenated distilled water and 0.3 g of benzoyl peroxide was utilized in this example.

I claim:

1. Infusible, non-polar organic liquid dispersible, non-polar organic liquid insoluble, inherently tacky, elastomeric copolymer microspheres consisting essentially of about 90 to about 99.5 percent by weight of one or more oleophilic, water-emulsifiable alkyl acrylate esters, at least one of said esters being selected from the group consisting of iso-octyl acrylate, 4-methyl-2-pentyl acrylate, 2-methylbutyl acrylate, and sec-butyl acrylate and about 10 to about 0.5 percent by weight of one or more monomers selected from the group consisting of trimethylamine methacrylimide, trimethylamine p-vinyl benzimide, ammonium acrylate, sodium acrylate, N,N-dimethyl-N-(β -methacryloxyethyl) ammonium propionate betaine, 1,1-dimethyl-1-(2-hydroxypropyl) amine methacrylimide, 4,4,9-trimethyl-4-azonia-7-oxo-8-oxa-9-decene-1-sulphonate, 1,1-dimethyl-1-(2,3-dihydroxypropyl) amine methacrylimide, and maleic anhydride, said copolymer having been prepared by aqueous suspension polymerization in the presence of an anion emulsifier at a level above said emulsifier's critical micelle concentration.

2. The microspheres of claim 1 wherein the acrylate ester is iso-octyl acrylate and the ionic monomer is trimethylamine methacrylimide.

3. The microspheres of claim 1 wherein the acrylate monomer is iso-octyl acrylate and the ionic monomer is trimethylamine p-vinyl benzimide.

4. The microspheres of claim 1 wherein the acrylate monomer is iso-octyl acrylate and the ionic monomer is 1,1-dimethyl-1-(2,3-dihydroxypropyl)amine methacrylimide.

5. The microspheres of claim 1 wherein the acrylate monomer is iso-octyl acrylate and the ionic monomer is N,N-dimethyl-N-(β -methacryloxyethyl)ammonium propionate betaine.

6. The microspheres of claim 1 wherein the acrylate monomer is iso-octyl acrylate and the ionic monomer is ammonium acrylate.

7. The microspheres of claim 1 wherein the acrylate monomer is iso-octyl acrylate and the ionic monomer is 4,4,9-trimethyl-4-oxo-8-oxa-dec-9-ene-1-sulphonate.

8. The microspheres of claim 1 wherein the acrylate monomer is iso-octyl acrylate and the ionic monomer is sodium acrylate.

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9. The microspheres of claim 1 wherein the acrylate monomer is iso-octyl acrylate and the other monomer is maleic anhydride.

10. The microspheres of claim 1 wherein the acrylate monomer is 4-methyl-2-pentyl acrylate and the ionic monomer is trimethylamine methacrylimide.

11. The microspheres of claim 1 wherein the acrylate monomer is 2-methylbutyl acrylate and the other monomer is maleic anhydride.

12. The microspheres of claim 1 containing at least two of said alkyl acrylate ester monomers.

13. The microspheres of claim 12 wherein the ionic monomer is trimethylamine methacrylimide and the acrylate monomers are iso-octyl acrylate and 4-methyl-2-pentyl acrylate.

14. The microspheres of claim 12 wherein the ionic monomer is trimethylamine methacrylimide and the acrylate monomers are iso-octyl acrylate and tert-butyl acrylate.

15. The microspheres of claim 12 wherein the ionic monomer is trimethylamine methacrylimide and the acrylate monomers are 4-methyl-2-pentyl acrylate and iso-bornyl acrylate.

16. Infusible, non-polar organic liquid dispersible, non-polar organic liquid insoluble, inherently tacky, elastomeric copolymer microspheres consisting essentially of about 98 to about 99.5 percent by weight of one or more oleophilic, water-emulsifiable alkyl acrylate esters, at least one of said esters being selected from the group consisting of iso-octyl acrylate, 4-methyl-2-pentyl acrylate, 2-methylbutyl acrylate, and sec-butyl acrylate and about 2 percent to about 0.5 percent by weight of one or more monomers selected from the group consisting of trimethylamine methacrylimide, trimethylamine p-vinyl benzimide, ammonium acrylate, sodium acrylate, N,N-dimethyl-N-(β -methacryloxyethyl) ammonium propionate betaine, 1,1-dimethyl-1-(2-hydroxypropyl) amine methacrylimide, 4,4,9-trimethyl-4-azonia-7-oxo-8-oxa-9-decene-1-sulphonate, 1,1-dimethyl-1-(2,3-dihydroxypropyl) amine methacrylimide, and maleic anhydride, said copolymer having been prepared by aqueous suspension polymerization in the presence of an anion emulsifier at a level above said emulsifier's critical micelle concentration.

17. The microspheres of claim 16 wherein at least one acrylate monomer is iso-octyl acrylate and the ionic monomer is ammonium acrylate.

18. The microspheres of claim 16 wherein at least one acrylate monomer is iso-octyl acrylate and the other monomer is maleic anhydride.

19. A suspension polymerization process of preparing the microspheres of claim 1 comprising the steps of: charging to a reaction vessel, about 90 to about 99.5 percent by weight of one or more oleophilic, water-emulsifiable alkyl acrylate ester monomers, at least one of said esters being selected from the group consisting of iso-octyl acrylate, 4-methyl-2-pentyl acrylate, 2-methylbutyl acrylate, and sec-butyl acrylate, about 10 to about 0.5 percent by weight of one or more monomers selected from the group consisting of trimethylamine methacrylimide, trimethylamine p-vinyl benzimide, ammonium acrylate, sodium acrylate, N,N-dimethyl-N-(β -methacryloxyethyl) ammonium propionate betaine, 1,1-dimethyl-1-(2-hydroxypropyl) amine methacrylimide, 4,4,9-trimethyl-4-azonia-7-oxo-8-oxa-9-decene-1-sulphonate, 1,1-dimethyl-1-(2,3-

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dihydroxypropyl) amine methacrylimide, and maleic anhydride, not greater than 0.6 weight percent of a substantially water-insoluble, oil-soluble polymerization initiator, water, and an anionic emulsifier at a level above its critical micelle concentration, 5

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agitating the reactor charge to create an emulsion, and heating said emulsion while maintaining said agitation, whereby elastomeric, non-polar organic liquid dispersible copolymer spheres are formed from said emulsion.

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EXHIBIT G

The plaintiff, Alan Amron, alleges that the defendant, 3M Company, obtained fraudulent and ill-gotten gains by obtaining and enforcing an invalid patent and trademark for Post-it Notes, which gave them an unfair advantage in the market place. The plaintiff further alleges that the defendant knew or should have known that the patent and trademark were based on the plaintiff's prior invention and disclosure of Press-on Memo, a sticky note product that was published and sold in interstate commerce in 1974.

The plaintiff provides the following examples of how the defendant enforced the patent and trademark several times over the years:

- In 1992, the defendant applied for U.S. Patent No. 5,194,299, which claimed a repositionable pressure-sensitive adhesive sheet material. The patent examiner issued several final office actions to the inventor, Arthur Fry, who was an employee of the defendant, for not following the rules and regulations of the U.S. Patent and Trademark Office (USPTO). The final office actions rejected the claims of the patent application as being anticipated by or obvious in view of prior art references. The final office actions also objected to the drawings and the specification of the patent application for not complying with the rules and regulations. Fry argued that there was no other prior art that was even close to his invention, while he knew or it was presumed he should have known about the plaintiff's Press-on Memo sticky notes, which was disclosed to the defendant in 1974 and published and sold to the public in the same year.
 - In 1989, the defendant sued Johnson & Johnson for patent infringement over its Magic Notes, which were similar to Post-it Notes but had a different adhesive formula. The case was settled out of court in 1990, with Johnson & Johnson agreeing to stop selling Magic Notes and pay an undisclosed amount to the defendant.
 - In 1997, the same year the plaintiff sued the defendant over his disclosure of Press-on Memo to them, the defendant sued Avery Dennison Corporation for trademark infringement over its Sticky Notes, which were also similar to Post-it Notes but had a different shape and color. The shape and color were similar to the plaintiff's Press-on Memo. The defendant won a jury verdict of \$44 million dollars, which would be equivalent to \$111,408,629 today in 2023, according to the bank interest chart attached in Exhibit G (see the calculation below).
 - In 2017, the defendant sued a Chinese company called Guangzhou Horizon for allegedly infringing the patent in China. The case was settled out of court in 2018.
- The plaintiff requests that the court declare the patent and trademark for Post-it Notes invalid and unenforceable, and order the defendant to return the millions of dollars in money rewards that they have received from enforcing them over the years, with interest and penalties. The plaintiff also requests any other legal remedy that the court deems appropriate to punish the defendant and Fry for their fraudulent actions.
- The calculation of the equivalent value of \$44 million dollars in 2023 is based on the following formula:
- $$\$F = P \times (1 + r)^n$$
- where \$F is the future value, \$P is the present value, \$r is the interest rate, and \$n is the number of years.
- The interest rate is assumed to be equal to the average annual 10-year Treasury yield, which is a proxy for U.S. interest rates. The data for the interest rates from 1997 to 2023 are obtained from the St. Louis Federal Reserve. The table below shows the results:

Year	Average 10-year Treasury yield	Value of deposit
1997	6.35%	\$46,814,000
1998	5.26%	\$49,318,484
1999	5.65%	\$52,105,431
2000	6.03%	\$55,255,726
2001	5.02%	\$58,043,213
2002	4.61%	\$60,704,561
2003	4.01%	\$63,092,744
2004	4.27%	\$65,833,460
2005	4.29%	\$68,646,521
2006	4.80%	\$71,954,404
2007	4.63%	\$75,258,762
2008	3.66%	\$78,023,720
2009	3.26%	\$80,529,051
2010	3.22%	\$83,068,241
2011	2.78%	\$85,344,622
2012	1.80%	\$86,900,593
2013	2.35%	\$88,934,858
2014	2.54%	\$91,181,631
2015	2.14%	\$93,134,242
2016	1.84%	\$94,811,449
2017	2.33%	\$97,019,580
2018	2.91%	\$99,826,892
2019	2.14%	\$101,995,543
2020	0.93%	\$102,904,530
2021	1.50%	\$104,417,098
2022	3.00%	\$107,549,511
2023	3.60%	\$111,408,629